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Dispositional Mediators Of Burnout Syndrome In A Sample Of Direct Care Staff Employed At Group Homes In A Midwestern State

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DISPOSITIONAL MEDIATORS OF BURNOUT SYNDROME IN A SAMPLE OF DIRECT CARE STAFF EMPLOYED AT GROUP HOMES IN A MIDWESTERN STATE

by

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DEDICATION

I would like to dedicate this dissertation to the chronically mentally ill

who live in group homes all over the world.

Hopefully this research, and future research to come,

will help to provide a better standard of care, and a better quality of life.

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Writing this dissertation sometimes felt like a torturous, and never-ending process. I found myself, at times, asking why I knowingly got into this; and yet, after completing writing the discussion section, I feel myself swelling with the happiness and pride I felt would never come even a few short months ago.

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CHAPTER I

INTRODUCTION

Background

Deinstitutionalization refers to a long process, starting in the 1950s of removing the mentally ill from state run hospitals and placing them in community settings, with the intent of offering them a less restrictive level of care. A number of factors led to this movement, starting with the successful development of antipsychotics in the early 1960s (Krieg, 2001; Trevor, 2004). A number of court cases involving the mentally ill in the 1950s also paved the way for deinstitutionalization by showing that individuals previously living in metal institutions could live independently, especially with the help of the newly developed antipsychotics. For example, the 1960 case of Shelton v. Tucker concluded that involuntary hospital admissions were only to be used as a last resort when treating the mentally ill. The judge in this case ruled that the right for mentally ill individuals to be free was more important than the right of the citizens to not be bothered (Krieg, 2001). In the 1975 O'Connor v. Donaldson case, it was ruled that mentally ill individuals who were admitted to hospitals against their will had the right to be treated and then discharged when their symptoms abated (Krieg, 2001). The process of deinstitutionalization was greatly accelerated when Medicaid and Medicare bills were instated because it meant that the mentally ill now had a means to support themselves in their communities. Between 1970 and 1996, the number of state run institutions for the mentally ill fell from 277 to 231. Within the same time range, in the United States, the population of severely mentally ill patients placed in hospitals fell from 186 per 100,000 population in 1969 to 33 patients per 100,000 population in 1992 (Rothbard & Kuno, 2000).

According to Rothbard and Kuno (2000), deinstitutionalization, in the United States, largely occurred in two waves, each having substantial effects on all levels of society. The first wave involved discharging patients with developmental disorders, dementia, individuals diagnosed with schizophrenia, the elderly, and others diagnosed with other organic disorders. The second, and most recent wave involved patients who were more disabled than prior cohorts; the chronically mentally ill. These individuals often presented with significant behavioral problems, making them more difficult to place in community settings (Rothbard & Kuno, 2000).

Krieg (2001) summarized research finding that although the mentally ill preferred to live independently, and reported that they preferred to have jobs and be involved with social and romantic relationships, deinstitutionalization resulted in many mentally ill individuals becoming homeless and/or incarcerated. This condition was referred by some as "reinstitutionalization" (Krieg, 2001, 2002). Some estimates suggested that deinstitutionalization accounted for an approximately 30% increase in the rate of homelessness, with estimates of mental illness among the homeless ranging from 30% to 50%. Studies also indicated that the mentally ill often decompensated after becoming ostracized and lonely when living in the community. According to the literature, the mentally ill living in the community may be at greater risk for becoming involved with prostitution, drug abuse, violence and crime, and were also at risk for unsafe sexual practices (Davidson, Hoge, Godleski, Rakfeldt, & Grifith, 1996).

Krieg (2001) summarized studies that tracked the prognosis of the severely mentally ill who were diverted to group homes and other community programs. He found that neglect and maltreatment of the severely mentally ill increased as a consequence of deinstitutionalization. In a bid to reduce costs, the majority of care provided to the mentally ill in the community was offloaded to paraprofessionals (M. Maigan, personal communication, August 17, 2011) leading

to criticisms that "the sickest of individuals are treated by the least competent staff" (Langsley, Barter, & Yarvis, 1978, p. 4). The focus of treatment, as a result of cost cutting, became drug oriented; with poor training of staff, little attention was given to other effective treatments (Langsley et al., 1978). As the financial burden on government was compounded with the present economic times, staff members in group homes for the severely mentally ill found themselves under increasing levels of pressure and stress which could lead to job burnout.

Maslach and Jackson (1981) were the first to define burnout as a combination of personal and environmental variables that lead to a syndrome which involves the experience of emotional exhaustion, depersonalization, and feelings of reduced personal accomplishment among people who care for others in their line of work. The authors noted that when workers become burnt out, their quality of work likely deteriorated, and possibly lead to very serious consequences which may negatively affect "the staff, the clients, and the larger institutions in which they interact" (Maslach & Jackson, 1981, p 100).

Traditionally, much of the research on burnout examined the situational variables associated with the burnout syndrome. Ronen and Mikulincer (2009) described the overemphasis of contextual variables in burnout research as "deficient" because the present research failed to account for individual characteristics that mediated burnout. Although situational determinants of burnout are important contributors to burnout syndrome, common knowledge states that individual employees in the same work environment may or may not experience burnout. On commenting about the antecedents of burnout, Savicki and Cooley (1983), p. 253 stated that "it is clear that an interaction between the individual and the environment is the most likely overall explanation." Thus, holding environmental variables constant, the dispositional characteristics of

the workers must also play a role in the experience of burnout (Prins & Van Der Heijden, 2010), and must also be examined in order to fully understand the antecedents of the burnout syndrome.

Leiter and Harvie (1996) reported, in their review of burnout research which occurred between 1985 and 1995, that research which placed burnout in the context of a personality theory held the most promise for understanding the syndrome, and for modeling interventions to combat against it. Studies that examined personality characteristics which were purported to place individuals at risk for developing burnout overwhelmingly focused on the trait theory of personality proposed by McCrae and John (1992). The Five Factor Model, or the "Big Five" model of personality outlined five broad factors that were thought to have genetic underpinnings, and were found in the personality traits of people across various cultures (McCrae, 2004). The personality traits identified in this model included: neuroticism vs. emotional stability; extroversion vs. introversion; lack of intellect/autonomy or closedness to experience vs. intellect/autonomy or openness to experience; hostility vs. agreeableness; and, lack of conscientiousness vs. conscientiousness (Bakker, Van der Zee, Lewig, & Dollard, 2006; Nevid, 2012). Studies found that certain personality traits were in fact related to the experience of burnout. For example, in a study of 80 volunteer counselors who cared for terminally ill clients, Bakker et al. (2006) used 3 separate stepwise multiple regressions to show that emotional exhaustion was predicted by the emotional stability personality trait; depersonalization was predicted by emotional stability, extroversion, and intellect/autonomy; and reduced personal accomplishment were predicted by extroversion and emotional stability. In another study, Morgan and de Bruin (2010) found that personality traits accounted for 13% of the variance in emotional exhaustion, 12.8% of the variance in depersonalization, and 24.8% of the variance in personal accomplishment. In this study, neuroticism was significantly related to emotional

exhaustion, extroversion was significantly related to depersonalization, and conscientiousness was significantly related to personal accomplishment. Although this study was conducted on a sample of 297 students who were enrolled in various programs in a South African University, the ethnicities of the students involved approximated the proportions observed in American Universities where much of the burnout research has traditionally been based. In this study, 60.7% of the population was Caucasian, 10.1% of the population was Asian, 25% consisted of African Blacks, and 3.4% of the population consisted of Blacks from other African nations (Morgan & de Bruin, 2010). Although Maslach and Jackson (1981) and Maslach (2003a) have acknowledged the role that personality plays in the experience of burnout, very few burnout studies have accounted for personality in their research. Even fewer contextualized their research in psychodynamic personality theories. Attachment, a psychodynamic theory of personality, is associated with extensive research that illustrates the ways in which attachment patterns mediate emotions, cognitions, and behaviors, including emotional regulation and one's responses to stress (Cassidy & Shaver, 2008; Mikulincer & Shaver, 2007). The insecure attachment type also parallels some of the characteristics associated with the neuroticism personality trait (vulnerability, agitation, anxiety, emotional instability, poor coping, etc.), making attachment a good candidate for personality-burnout research.

In her book *Burnout, The Cost of Caring*, Maslach (2003a) dedicated an entire chapter to coping, and its mitigating effects on burnout. According to Maslach and Goldberg (1998), and Maslach, Schaufeli, and Leiter (2001), the lack of effective coping skills in employees, who worked in caring positions, was critical to their experience of burnout. D'Zurilla and Sheedy (1991) reported that problem solving was an important form of coping that potentially reduced, minimized, or prevented the stress that may eventually lead to burnout. Social problem Solving

was defined by D'Zurilla (1971; 1982) as a form of coping that occurred in real world situations. D'Zurilla, Chang, and Sanna (2004) emphasized that social problem solving was an individual, conscious, rational, effortful, and purposeful process that was employed in times of distress; and, D'Zurilla and Chang (1995) emphasized that coping was a construct used to account for the individual, or dispositional, differences in which responses to stressful situations were made. Because problem solving is an important form of coping, it was hypothesized to be significantly related to the burnout syndrome. Furthermore, problem solving ability has been shown to be malleable (D'Zurilla & Nezu, 1999), and is therefore a likely candidate for future interventions. For example, Mynors-Wallis, Gath, Day, and Baker (2000) used a randomized controlled study to examine the impact of problem solving training, antidepressant medication, or a combination of both in a sample of 151 clinically depressed adults. The results of the investigation showed that all groups showed a significant improvement in the level of their depression after the 12-week problem solving intervention, and at the 52 week follow-up. Furthermore, the combination of antidepressant medication and problem solving training was no more beneficial than either treatment alone, and the problem solving training was equally as effective when administered by a suitably trained general practitioner, or practical nurse in the patient's home or health center (Mynors-Wallis et al., 2000). Eskin, Kurt, and Demirkiran (2012) also examined the effect of problem solving training on burnout in a randomly controlled trial. The authors randomly assigned 40 nurses, who were employed at a research hospital, to a 6-week problem solving group, developed by D'Zurilla & Goldfried (1971) and D'Zurilla & Nezu (1999), or a waiting list control. Group objectives involved providing a rationale for problem solving, defining the problem, goal setting, generating alternative solutions, decision making, and solution implementation and verification. Eskin et al. (2012) found that nurses in the experimental group

were experiencing significantly lower levels of distress at the 6 week follow up, as opposed to nurses in the control group whose distress levels remained unchanged.

Statement of the Problem and Need for Research

The need for the present study is fivefold: First, although a wealth of information is available that pertains to the myriad of variables that influence behaviors of individuals with severe mental illness, the knowledge base that serves the direct care staff who work with this population is in its infancy (Goodwin, 2003; Lee, Forster, & Rehner, 2011). Most of the research conducted in the group home setting generally is based on the group home residents (Goodwin, 2003; Lee et al., 2011), even though the staff are principally responsible for the well-being of their clients (Acker, 2010).

According to Pernice-Duca, Saxe, and Johnson (2010), the staff members who worked in mental health programs directly and indirectly affected the quality of the program, and were important elements in creating environments that were conducive to mental health recovery and empowerment. For example, Hatton et al. (1999) examined research in the area of industrial organizational psychology and found that high stress in staff who worked with adults diagnosed with mental illness and developmental disabilities was implicated in poor staff performance, absenteeism, and high levels of staff turnover. These work-related concerns can be detrimental for severely mentally ill individuals who require stability, consistency, and a high quality of care.

Because there is a reciprocal determinism which exists in the causation of behaviors (Bandura, 1986), burnout in direct care staff must be addressed in order to understand the various responses that these individuals make when working with at risk clients in stressful environments, and to improve the quality of training and preparation for these individuals. Although this research was not examining patient outcomes, research in this area is still

important because a research focus that favors one side of a bidirectional process is counterproductive when staff are bringing their own idiosyncratic traits to the proverbial table.

Second, much of the existing research on burnout, attachment, and problem solving, and in the social sciences in general, has been conducted on college students (Arnett, 2008; Cheng et al., 2007; Henrich, Heine, & Norenzayan, 2010). This research is difficult to generalize to direct care staff who generally do not have college educations. Given the importance of the role of direct care staff in the lives of their chronically mentally ill adult residents, it is important that burnout status be examined in this population (Acker, 2010; Lee et al., 2011).

Third, most outcome research on burnout, attachment, and problem solving involved the study of the constructs as wholes. Few researchers examined the complexities of the interactions between the components of their constructs. For example, Baker (2003) criticized problem solving research as a whole because researchers ignored the problem solving constructs that have many sub-components, as does the attachment construct, and the burnout syndrome construct. D'Zurilla and Nezu (1990) argued that the subcomponents of the problem solving construct should always be examined in research because impairments in problem solving ability may differ greatly from one individual to another. By examining the subcomponents of the social problem solving construct, the subcomponents that are related to one's adjustment can be better understood (D'Zurilla & Nezu, 1990; Eliot & Marmarosh, 1994). Grau-Alberola, Gil-Monte, García-Juesas, and Figueiredo-Ferraz (2010) reported that 90% of the research conducted on the burnout construct involved the Maslach Burnout Inventory, which can either classify burnout as a total score, or as a combination of the three subscale scores. According to the authors, the vast majority of burnout researchers used total scores, and thus missed important details which could

only be obtained by examining the subscales on the burnout measure (Grau-Alberola et al., 2010).

Fourth, the majority of research in the area of burnout has been environmentally driven, despite the evidence showing that the burnout syndrome is determined by both dispositional and situational factors (Maslach, 2003b; Maslach & Jackson, 1981). In terms of dispositional factors, it has been argued, ex. (Leiter & Harvie, 1996), that burnout research is most beneficial when presented within the context of a personality theory. Although research linking burnout to personality exists, most of the research grounding burnout in the context of personality theories ignores the psychodynamic perspective, even though contemporary psychodynamic theories, such as attachment theory, have demonstrated that attachment patterns can mediate burnout status (Malach Pines, 2004; Ronen & Baldwin, 2010a).

Fifth, other dispositional factors associated with burnout, especially those that are malleable and easily targeted for interventions, must be examined in order to improve the quality of training for direct care workers who presently care for individuals who live in group homes and have been diagnosed with chronic mental illnesses. One such factor that holds promise for direct care staff training is social problem solving ability. Because social problem solving ability involves cognitive-behavioral, and motivational factors (Grant et al., 2006), it is a perfect candidate for intervention (Eliot & Marmarosh, 1994) in direct care staff who work with individuals with chronic mental illness. There is a large body of research relating poor coping to burnout (Ben-Zur & Michael, 2007; Eliott, Shewchuk, Hagglund, Rybarczyk, & Harkins, 1996; Maslach, 2003a) which shows that the construct is a very important personal factor in psychological adjustment. Acker (2010); Lee et al. (2011); Smith and Moss (2009) all pointed to the need for increased direct care staff training for the benefit of client outcomes in mental health

fields. Social problem solving interventions have already been shown by some to be efficacious in reducing burnout (Eskin et al., 2012; Mynors-Wallis et al., 2000). Furthermore, since problem solving orientation influences emotions while coping (Eliot & Marmarosh, 1994; T. R. Elliot, Herrick, Macnair, & Harkins, 1994; Elliott, Sherwin, Harkins, & Marmarosh, 1995; Westcott, 1995); this component of social problem solving is vitally important when considering that insecure attachments are associated with increased affectivity that results in the implementation of poorer coping strategies at work (Harms, 2010; Mikulincer & Florian, 1995).

Attachment orientation and problem solving ability were examined in this study because they were the most commonly measured variables in the burnout literature. Maslach (2003a) stated that personality and coping ability were two of the most important dispositional factors related to burnout. Considering the minimal training requirements legislated by the state of Michigan for employment in group homes for the mentally ill, attachment and problem solving ability may unfortunately be the staff's best defense against burnout. This study attempted to fill a gap in the burnout research by understanding the mediating role of the previously researched dispositional characteristics associated with burnout status, and thus improve the quality of service for an at risk population. The study was rooted in the foundation of attachment, a contemporary psychodynamic theory of personality, in order to provide a context for the dispositional variables. To ensure a greater understanding of the influence that the dispositional characteristics of attachment style and problem solving ability had on burnout status, the sub-components of the constructs rather than the constructs as wholes, were examined.

Purpose of the Study

This study examined the nature of the indirect effects that the direct care worker's attachment systems and problem solving abilities had on their burnout status'. A contemporary

psychodynamic theory, attachment theory, was used to outline the underlying psychodynamic foundations of personality to improve the quality of service for a vulnerable population (i.e., group home residents). By gaining a deeper understanding of the complexities of the interactions between the construct sub-components, the researcher obtained important information related to the treatment of people diagnosed with chronic mental illness. This information could potentially be used as a first step towards providing a better standard of care for a vulnerable population, and may save taxpayers money.

Research Questions

The following research questions were addressed in this study:

1. Can burnout be predicted from avoidant and anxious attachment and problem solving ability among staff working with clients who have been diagnosed with a chronic mental illness and who lived in a group home setting?

2. Does adult attachment, as measured by anxiety and avoidance, mediate the relationship between problem solving ability and burnout among staff who were working with clients diagnosed with a chronic mental illness and who lived in a group home setting?

3. Can burnout be predicted from personal characteristics of the direct care staff (age, gender, marital status, educational level, presently working toward higher education) and organizational characteristics (hours worked per week, length of time working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population?

Definition of Terms

The following terms are used in this study:

Attachment:

Bowlby first defined attachment as a proximity based sense of security that a distressed infant feels in the presence of his caregiver (Ainsworth & Bowlby, 1991). In this study of adult attachment, attachment referred to the two-dimensional conceptualization put forth by (Brennen, Clark, & Shaver, 1998). The two dimensions are attachment anxiety and attachment avoidance.

Social Problem Solving:

In this study, problem solving was explained using D'Zurilla and colleagues' 1971, and 1982 Social Problem Solving theory. The theory posits that social problem solving, problem solving in the real word, consists of positive or negative problem solving orientation, and rational, impulsive, and avoidant problem solving styles (Belzer, D'Zurilla, & Maydeu-Olivares, 2002). The adjective "social" was not meant to limit the type of problem solving assessed using this instrument, but to convey that the problem solving being measured happens in everyday situations in one's social world, or natural environment (D'Zurilla et al., 2004).

Burnout Syndrome:

In this study, burnout syndrome referred to the "emotional exhaustion, depersonalization, and reduced personal accomplishment that could potentially occur among

individuals who do 'people work' of some kind" (Maslach,

2003a , p 2).

Chapter II

Review of the Literature

Michigan Direct Care Staff Guidelines

According to the State of Michigan, Department of Human Services, licensing requirements for small adult care foster homes (12 individuals or less), stated that a "Direct Care Staff" was an adult "who is designated by the licensee to provide personal care, protection, and supervision to residents" (Michigan, 1996, p. 1). The document outlined qualifications that a direct care staff must have to work with an adult diagnosed with a chronic mental illness residing in a group home in the state of Michigan. According to the document, a direct care staff must "not be less than 18 years of age and shall be able to complete required reports and follow written and oral instructions that are related to the care and supervision of residents" (Michigan, 1996, p. 7). Direct care staff should also be able to "meet the physical, emotional, intellectual, and social needs of each resident. . . [and be] capable of appropriately handling emergency situations" (Michigan, 1996, p. 7).

The document also outlined the training that direct care staff must complete in order to work with adults diagnosed with chronic mental illness and living in a group home in the State of Michigan. According to the State of Michigan, Department of Human Services (Michigan, 1996), the licensing requirements for small adult care foster homes stated that direct care staff must be competent in the following areas before completing assigned tasks:

1. Reporting requirements.

2. First aid.

3. Cardiopulmonary resuscitation.

4. Personal care, supervision, and protection.

5. Resident rights.

6. Safety and fire prevention.

7. Prevention and containment of communicable diseases. (p. 7-8).

In terms of staffing, the State of Michigan (Michigan, 1996), Department of Human

Services licensing requirements for small adult care foster homes stated that:

1. The ratio of direct care staff to residents shall be adequate as determined by the department, to carry out the responsibilities defined in the act and in these rules and shall not be less than 1 direct care staff to 12 residents and children who are under the age of 12 years.
2. A licensee shall have sufficient direct care staff on duty at all times for the supervision, personal care, and protection of residents and to provide the services specified in the resident's resident care agreement and assessment plan.
3. Any individual, including a volunteer, shall not be considered in determining the ratio of direct care staff to residents unless the individual meets the qualifications of a direct care staff member.
4. Direct care staff need not be in the home during the day if all of the residents of the home are at out-of-home supervised activities and the home has provided the means by which a direct care staff member or administrator can be contacted in an emergency situation. (p. 8-9)

Current state law requires that employers in Michigan pay at least the minimum wage of

$7.40 per hour to any employee 18 years of age or older (Michigan, 2012). According to the

Foreign Labor Certification Data Center Online Wage Library, personal care and service workers

in the Michigan county that was examined in this research study earned on average, $8.20 per

hour, or $17,056 per year (US Department of Labor, 2012).

Attachment as a Contemporary Psychodynamic Theory of Psychology

Shaver and Mikulincer (2005), and Cassidy and Shaver (2008) asserted that attachment is

a contemporary psychodynamic theory of personality. The authors reported that Bowlby (1973)

was a psychoanalyst who thought of himself as retracing the footsteps of Freud, but with less

emphasis given to sexual and aggressive urges. Westen (1998) outlined the five core postulates

that comprised any contemporary psychodynamic theory. These postulates included: (a) Unconscious emotional, cognitive, and motivational processes, (b) Cognitive and affective processes operating in parallel, and sometimes leading the individual to experience conflicting thoughts and emotions which at times lead to the deployment of defense mechanisms, (c) The idea that personality has its origins in childhood, (d) Mental representations of the self, others, and relationships, and (e) Developmental dynamics; the idea that one matures from an immature dependent state to a mature, autonomous/independent state. Shaver and Mikulincer (2005) explained that attachment theory "is obviously a psychoanalytic theory" (p. 4) because it adhered to all five postulates that comprised contemporary psychodynamic theories. The attachment system has been shown to activate unconsciously at times. The goals and operations of attachment strategies have been shown to operate together, or in opposite ways. They can operate on a conscious, or unconscious level, and can at times activate defense mechanisms. Attachment theory suggested that infant – caregiver patterns are responsible for laying out personality patterns that are stable into adulthood. Attachment theory includes mental representations of the self and others. These mental representations are the building blocks for future cognitions, affects, and behaviors. The transition from childhood attachment to adult attachment shows the progression from a dependency on a caregiver for comfort and security to the more mature behaviors associated with exploration, and self-reliance (Shaver & Mikulincer, 2005).

Attachment in Children

Attachment is referred to as a proximity based sense of security that individuals felt when they were within acceptable range of a secure base (Ravitz, Maunder, Hunter, Sthankiya, & Lancee). Attachment was first conceptualized in the late 1960s by John Bowlby. Bowlby (1973) posited that individuals were born with innate mechanisms that served to attract attachment

figures, and keep them in close proximity. Joplin, Nelson, and Quick (1999) cited psychobiological research that found that the attachment system became activated any time an individual became distressed; i.e., any time an individual experienced an actual or implied threat. The result was the alleviation of the individual's distress through the presence of the caregiver (Ein-Dor, Mikulincer, Doron, & Shaver, 2010).

Ainsworth (1978) devised a study to assess children's attachment styles. In her research, she introduced children into a 'Strange Situation' and measured their responses upon reunification with their mothers. She found that children responded in one of three ways: (a) securely attached children returned to their mothers, and were easily soothed; (b) insecure avoidant children avoided contact with their mothers, and were not easily soothed; (c) insecure ambivalent children showed both proximity seeking, and avoidant behaviors. Main (Cassidy & Shaver, 2008) described a fourth attachment pattern termed "Disorganized." This attachment pattern described children whose reunions with their mothers did not fit neatly into one of the three main categories. In Ainsworth's (1978) Strange Situation experiment, approximately 60% of the infants were categorized as securely attached, while 20% were categorized as insecure avoidant, and 10% were classified as insecure ambivalent. The remaining 10% were later classified as disorganized by Main (Nevid, 2012).

The caregiver in Ainsworth's (1978) Strange Situation served as a safe haven; an adult the child could rely upon for physical and emotional support in times of distress, and as a secure base; a caregiver who's physical proximity was soothing enough that the child could feel comfortable exploring and mastering novel environments in their presence (Mikulincer & Shaver, 2003). According to Mikulincer, Florian, and Weller (1993), Bowlby theorized in 1969, 1973, and 1980 that parental responsiveness and sensitivity during times of distress in early

childhood were the most important factors in terms of developing a secure attachment with their caregiver. The consistent and predictable availability and sensitivity of the attachment figure (caregiver) resulted in a sense of security in the child, while the unavailability, unpredictability, or unresponsiveness of the attachment figure resulted in a sense of insecurity (Dykas & Cassidy, 2011).

The caregiver's availability and sensitivity also lead to the formation of the internal working model of the self, and the internal working model of others (Bartholomew & Horowitz, 1991). The internal working model of the self represents an individual's efficacy and sense of importance and answers the question of whether or not the child is the kind of person that others, and in particular the caregiver, are likely to support in times of distress. The internal working model of others is concerned with the attachment figure's responses and serves to answer the question of whether or not the caregiver is the kind of person who will volunteer help and support in times of need (Kotler, Buzwell, Romeo, & Bowland, 1994), or whether or not the caregiver is available, responsive, and trustworthy (Feeney, 2005).

The child's attachment relationships are thus internalized, and later used as reference points (Wright & Perrone, 2008) or schemas (Crittenden, 1990; Simpson & Rholes, 1998) that serve to guide future relationships and a number of systems including coping, feelings of self-worth, attributions, problem solving, and adaptation to environments, including changing and otherwise stressful situations (Ein-Dor, Mikulincer, & Shaver, 2011; Harms, 2010; Mikulincer & Shaver, 2003). Attachment styles, and internal working models, according to Bowlby (1973), are relatively stable from childhood and into adulthood (Bartholomew & Horowitz, 1991; Cassidy & Shaver, 2008; Dykas & Cassidy, 2011; Ein-Dor et al., 2010; Harms, 2010). Thus, over time, attachment styles generalize to all relationships and shape the individual's responses across all

three of the psychological domains: affect, behavior, and cognition (Dykas & Cassidy, 2011; Krausz, Bizman, & Braslavsky, 2001). Zayas, Mischel, Shoda, and Aber (2011) provided the first longitudinal support for the stability of the attachment system by finding that maternal attachment at 18 months was significantly related to attachment patters with romantic partners and peers at 22 years of age. The researchers used coders to assess the interactions between mothers and 36 female, 18 month olds, who were from Caucasian, middle to upper class urban households. These same individuals, who were part of a larger study, were contacted over 20 years later and asked to fill out versions of the ECR-R that measured their specific orientations to general attachments (across all relationships), mothers, fathers, closest friends, and current romantic partners. Fifteen females were involved in romantic relationships at age 22. According to the results, greater maternal sensitivity at age 18 months predicted less avoidance at age 22 ($r = -.73$, $p < .002$), and less anxiety at age 22 ($r = -.75$, $p < .001$). The researchers also found that maternal sensitivity was predictive of less avoidance to friends in adulthood ($r = -.49$, $p < .003$), and that maternal insensitivity was predictive of greater adult avoidance to friends ($r = .37$, $p < .03$), and greater avoidance ($r = .52$, $p < .05$), and anxiety ($r = .70 < .001$) to partners in adulthood (Zayas et al., 2011). Interestingly, the correlations suggested that attachment relationships influenced more than the mother-infant bond; the attachment relationship is generalized to other relationships, such as those with romantic partners, and peers (Zayas et al., 2011).

The quality of the attachment bond between the child and caregiver, thus was found to have a great influence on personality, through the internal working model, and was indicative of the adult's affects, behaviors, and cognitions, including his/her reaction to stress across the life span (Mikulincer & Shaver, 2007). Research also showed that in addition to the stability of the attachment system, something Bowlby (1988) and Ainsworth (1990) insisted was from the

'cradle to the grave' (A. J. Elliot & Reis, 2003; Fraley & Shaver, 2000; Pellegrini, Hicks, Camagna-Foley, & Donato, 2003), attachment patterns are transmitted from parent to child in a multigenerational fashion, meaning that a child's attachment to his mother can be predicted from the mother's attachment to her own mother (Bartholomew & Horowitz, 1991; van Ijzendoorn, 1995).

Adult Attachment

Adult attachment is an important and growing area of research that has evolved over several decades. Hazen and Shaver (1987) first conceptualized adult attachment as comprised of the ways that adults think, feel, and behave in romantic relationships. Their three adult attachment styles (secure, insecure/avoidant, and insecure/ambivalent) were meant to mirror the three attachment styles found in children (Mikulincer & Shaver, 2003).

Hazen and Shaver's (1987) theory led to the development of the Adult Attachment Types Measure, which consisted of three vignettes that corresponded with the 3 child attachment styles (Richards & Schat, 2011). Hazen and Shaver, (1987) asked adults to rank themselves on a 7 point Likert scale indicating that the vignette was 1) "Not at all like me," to 7) "Very much like me," and concluded that just over 56% of adults classified themselves as securely attached, while 25% classified themselves as avoidantly attached, and 19% classified themselves as anxiously attached (Mikulincer & Shaver, 2007). These proportions of adult attachment styles were similar to the proportions of attachment style classifications found in children (Malach Pines, 2004).

Bartholomew (1990) and Bartholomew and Horowitz (1991) expanded upon Hazan and Shaver's (1987) three-category model of attachment by proposing a four-category model of adult attachment (Gillath, Hart, Noftle, & Stockdale, 2009). In their model, Bartholomew and Horowitz (1991) looked at the internal working model of the self (dependence) and of others

(avoidance), that Bowlby (1973) had originally proposed, and described four adult attachment prototypes:

1. *Secure attachment* indicated a sense of worthiness or lovability and a sense that others were warm and accepting;

2. *Preoccupied attachment* represented a sense of personal unworthiness, and a sense that others were warm and accepting;

3. *Fearful attachment* reflected a sense of personal unworthiness and unlovability, and a sense that others would be rejecting and unresponsive to their needs; and

4. *Dismissing attachment* indicated a sense of personal worthiness or lovability, and a sense of rejection from others.

More recently (Simpson & Rholes, 1998), the focus on adult attachment shifted to a two dimensional approach that mirrored Ainsworth's (1978) conceptualization of infant-mother attachment (P. R. Shaver & M. Mikulincer, 2002). According to Ainsworth and Bowlby (1991), infants in the strange situation demonstrated patterns of attachment anxiety and attachment avoidance. At the time, infant attachment was categorized (secure, anxious/resistant, avoidant, and disorganized) for the ease of understanding, and distinguishing between, the different types of attachment; although, "people don't really come in such neat categories" (K. Bartholomew, personal communication, November 5, 2012). Adult attachment is best conceptualized dimensionally, rather than categorically, as a region in a two dimensional space. According to Brennen et al. (1998), and Fraley (2010), the two dimensions of adult attachment are attachment anxiety and attachment avoidance. Individuals who scored high on attachment anxiety tended to worry about whether their partners were available, attentive, and responsive, while individuals who scored low on attachment anxiety were more secure in their beliefs about their partners

(Fraley, 2010). Individuals who scored high on attachment avoidance preferred not to depend on or open up to others, while individuals who scored low on this dimension were more comfortable with being intimate, and relying upon others. Secure individuals, thus, were low on both attachment related anxiety and avoidance (Fraley, 2010). There are no arbitrary cutoffs for determining how low one needs to be on each dimension before one can be classified as secure because the dimensions are continuous (C. Fraley, personal communication, November 4, 2012). Research shows that the attachment anxiety and avoidance dimensions parallel Bartholomew (1990) and Bartholomew and Horowitz's (1991) attachment dependence and attachment avoidance factors (Brennen et al., 1998; Cassidy & Shaver, 2008; Mikulincer & Shaver, 2005; Mikulincer & Shaver, 2007), and that the attachment anxiety and attachment avoidance factors map onto the model of self and model of others factors proposed by Bartholomew and Horowitz (1991). The attachment anxiety and avoidance factors proposed by Brennen et al. (1998) may be used to yield Bartholomew and Horowitz's (1991) four adult attachment styles: secure, preoccupied, fearful, and dismissing (Fraley & Shaver, 2000; Mikulincer & Shaver, 2007). Please see Figure 1 for a diagram of the Brennen et al. (1998) and Bartholomew and Horowitz (1991) dimensions superimposed on one another.

Research on adult attachment generally finds that adults with high attachment insecurity (anxiety and avoidance) are likely to view others as unresponsive (Mikulincer & Florian, 1995). These individuals are less likely to trust others, and have poorer coping and problem solving skills, making it more difficult for insecurely attached adults to deal effectively with adversity (Mikulincer & Shaver, 2003). In contrast securely attached adults, low on both attachment anxiety and avoidance, view themselves as worthy, view others as trustworthy, have greater

resilience, and are better prepared to cope with adversity by drawing on their own internal coping resources and support from others (Richards & Schat, 2011).

Malach Pines (2004), in the same fashion, reported that it has been repeatedly shown "that a secure attachment in childhood helps adults to positively appraise stressful situations and cope with them constructively. . . [and that] insecure attachment in childhood (either avoidant or ambivalent) leads in adulthood to poor coping and maladjustment" (Malach Pines, 2004, p. 68).

The Internal Working Model of Adults

During infancy, the internal working model schema is based on the quality of the relationship between the infant and the caregiver (Bowlby, 1973). In adulthood, however, a wide variety of individuals, such as parents, friends, and especially romantic partners, may serve as attachment figures (Mikulincer & Shaver, 2003). Unfortunately in adult life, proximity seeking in times of distress is not always an option and thus adults are forced to rely upon their internal working models (mental representations of early attachment figures) to help them feel safe and secure (Ein-Dor et al., 2010; Mikulincer & Shaver, 2003). Because the internal working model is capable of activating coping responses (Mikulincer & Shaver, 2003; P. R. Shaver & M. Mikulincer, 2002), the quality of the adult's attachment influences his/her coping style in times of adversity (Mikulincer & Florian, 1995; Mikulincer et al., 1993; Mikulincer, Horesh, Eilati, & Kotler, 1999). Cassidy, as cited in (Berry, Barrowclough, & Wearden, 2007), also showed that the internal working model of the individual guided his/her attention, memory, attributions, and predictions about future social relationships in times of distress.

Adult Attachment and Work

Because attachment is viewed in the literature as a comprehensive theory of personality (a construct which is stable across settings), it was perplexing to note that there was little

research examining the complexities of the attachment system in vocational settings (Harms, 2010, 2011; Hazan & Shaver, 1990; Malach Pines, 2004; Meredith, Poulsen, Khan, Henderson, & Castrisos, 2011; Vanheule & Declercq, 2009). In his review of adult attachment styles in the workplace, Harms (2011) performed an informal examination of 19 introductory textbooks on organizational psychology and human resource management and found that none of the publications mentioned attachment. Furthermore, in his criticism of professional books targeting workplace management specifically, he found that the authors rarely commented upon the importance of attachment (Harms, 2011).

Exploration

Hazan and Shaver (1990), on the other hand, were two researchers who looked at attachment behaviors in the work place. They were the first to conceptualize work related behaviors as a type of adult exploration. Since then, a number of researchers, ex. (Meredith et al., 2011; Ronen & Baldwin, 2010b; Vasquez, Durik, & Hyde, 2002) reported a clear link between attachment styles and adult functioning in the workplace.

Hazan and Shaver (1990) looked at a sample 670 individuals from various work settings who answered an ad in a large Denver newspaper (143 men, 522 women, mean age 39, average household salary $30,000 - $40,000, average level of education "graduated college," 49% married) and found that activities performed in the work place were essentially analogous to exploratory behaviors in children. In Bowlby's (1973) theory, one must explore one's own physical and social environment in order to learn about it and become competent at interacting within it (Hazan & Shaver, 1990). According to the authors, Bowlby (1973) emphasized that children use secure bases (adults with whom they have formed attachments) as a form of security, or moral support, when they were exploring/playing in their environments. The

presence of this secure base facilitated exploration, and more importantly, mastery of novel environments. Like children in novel environments, adults at work are able to sooth themselves when stress arises, without retreating to a secure base, because they internalized their working models, and are able to mentally draw upon their internal resources (Harms, 2010; Mikulincer et al., 1993; Vasquez et al., 2002). Literature regarding adult exploration has found that the exploration system in adults mimics that of children. Insecurely attached adults were restricted in their exploratory behaviors, while securely attached adults thrived in and mastered their environments, even when they were stressful (Martin, Paetzold, & Rholes, 2010). Subsequently, attachment security, in both children and adults, is a prerequisite to productive, meaningful exploration and leads to adeptness at, and greater ease interacting within, and mastering new environments (A. J. Elliot & Reis, 2003).

Hazan and Shaver (1990) argued that mastery of the work environment could lead to actual or perceived competence, factors that were important contributors to life satisfaction, self-esteem, social prestige (Hazan & Shaver, 1990; Mikulincer & Shaver, 2007), and positive problem solving (Tisdelle & St. Lawrence, 1986). Since adult attachment supported work activity in the same way that infant attachment supported exploration, a securely attached adult was less likely than an insecurely attached adult to experience work related stress, burnout, dismissal, and unemployment (Mikulincer & Shaver, 2007).

Hazan and Shaver (1990) also found that securely attached adults approached work with more confidence, were unburdened by fears of failure, and had greater overall wellbeing, as evidenced by fewer instances of depression and anxiety, fewer complaints of loneliness, fewer instances of irritability, and fewer reports of colds and flu (Hazan & Shaver, 1990). Secure individuals are known to have a greater capacity to regulate their emotions, and to respond more

effectively to stressful situations in general (Harms, 2011). Meredith et al. (2011) similarly reported, in a sample of 486 pediatric occupational therapists in Australia, that securely attached individuals were more likely than their insecurely attached counterparts to invest more skill and energy at work, and to feel less overcommitted and thus experience fewer instances of burnout, illness, decreased job performance, and had greater degrees of job satisfaction.

In contrast, anxiously attached individuals were more likely to worry about their relationships in the workplace, and were more prone to job dissatisfaction, stress, and burnout (Harms, 2010). These individuals were chiefly preoccupied with rejection, and were overly concerned with others' responses and availability, and thus spent a great deal of time dwelling upon their interpersonal relationships (Mikulincer et al., 1993). Because anxious adults' attachment needs were hyper-aroused, they tended to perceive their jobs as potential opportunities for rejection and disapproval and were affected negatively at work because their attachment related preoccupations interfered with their work related duties (Harms, 2010; Hazan & Shaver, 1990). Anxiously attached individuals were more likely to react negatively in stressful situations (Mikulincer & Shaver, 2005), and were more likely to feel overworked, misunderstood, and unappreciated in work settings (Hazan & Shaver, 1990). The experiences of feeling overworked, unappreciated, and misunderstood at work were strongly associated with burnout syndrome (Maslach, 2003a). Similarly, Mikulincer and Florian (1995), Mikulincer et al. (1993), and Malach Pines (2004) showed that anxiously attached adults problem solved and coped with burnout causing factors in stressful situations by perseverating over the problem rather than coping in a more effective manner. This type of coping pattern could be counterproductive in a stressful work setting.

Avoidantly attached individuals, while less prone to report job dissatisfaction, were thought to be prone to stress and burnout because of their difficulty with disengaging their emotions. They were generally described in work environments as being insecure about others' intentions, and as preferring emotional detachment (Meredith et al., 2011). These individuals were more likely to use work to escape social involvement (Harms, 2010; Hazan & Shaver, 1990; Richards & Schat, 2011), and were more likely than anxiously attached individuals to fret over the number of hours worked, be dissatisfied with their work in general, argue with their colleagues at work, and be dissatisfied with their home life and other social relationships (Hardy & Barkham, 1994). Mikulincer and Florian (1995), Mikulincer et al. (1993), and Malach Pines (2004) also found that avoidantly attached adults were more likely to solve their work related problems by avoiding them.

Stress

The concept of stress evolved since early experiments showed that animals reacted in stereotypic ways to a variety of factors including intoxicants, nervousness, infection, trauma, strain, heat, cold, and muscular fatigue (Selye, 1955). In his 1975 book *Stress Without Distress*, Selye (as cited in Bodman, 1976) defined stress as the nonspecific response of the body to any demand made upon it. Selye (1955) later refined the concept by distinguishing between a stressor (a stimulus that threatened homeostasis), and stress response, the body's reaction and attempt at regaining equilibrium, (Koolhaas et al., 2011). Selye (1955) proposed that the body, in response to stress, mobilized its defenses in a way that prepared it to fight or flee the impending danger. The fight or flight response is the manifestation, or the result of the activation of the hypothalamic-pituitary-adrenal (HPA) axis. Repeated activation of this neural circuit, which

Selye stated "seems to flourish on stress" (Selye, 1955, p. 2), leads to a prolonged 'General Adaptation Syndrome' (GAS). The GAS is comprised of three distinct stages:

Stage 1. The Alarm Reaction is characterized by hyperactivity of the adrenal cortex, and the secretion of cortisol. In humans, cortisol is released from the adrenal glands following a cascade of hormones along the hypothalamic-pituitary-adrenal (HPA) axis, in response to stress (Marin et al., 2011).

Stage 2. Resistance is characterized by a disappearance of alarm reaction changes as the body adjusts to the stressor, and attempts to maintain homeostasis.

Stage 3. Exhaustion occurs when a chronic stressor uses up all of the body's defenses. If nothing changes, the organism may actually die from the stressor (Bodman, 1976).

Burnout

The concept of burnout was first proposed by Freudenberger in 1974 (as cited in Burke & Greenglass, 1995) to describe the state of exhaustion he observed in a sample of volunteer workers at a free health clinic. Burnout essentially is the end result of the progression of chronic stress (Jenaro, Flores, & Arias, 2007). The definition of burnout has evolved over the years from a symptom of stress to a more encompassing stress syndrome. Hogan and McKnight (2007) defined burnout as a psychological and physiological reaction to chronic stressors; however, the most widely accepted definition of burnout today is proposed by Maslach and Jackson (1981) who defined it as a syndrome of stress that is characterized by emotional exhaustion, depersonalization, and feelings of reduced personal accomplishment.

With respect to the subcomponents of the burnout syndrome proposed by (Maslach & Jackson, 1981), Maslach (2003a) defined emotional exhaustion as feeling "drained and used up...

with no source of replenishment" (p. 3) Halbesleben and Buckley (2004) suggested that emotional exhaustion (Maslach & Jackson, 1981) referred to the feeling that employees experienced when they were emotionally depleted and unable to contribute personal resources to their job. According to Maslach and Leiter (1997), emotional exhaustion constitutes an actual inability to respond, not just a reduced desire to perform work duties, and is marked by feelings of overextension, both emotionally and physically. Depersonalization (Maslach & Jackson, 1981), was referred to by Sas, Boros, and Bonchis (2011) as "estrangement, abandonment, and dehumanization of the relationships with the persons who expect "personal investment," (p. 2). According to the literature, the emotionally exhausted employee eventually detaches from the job and develops callous feelings towards his/her clients, coworkers, and employer (Halbesleben & Buckley, 2004). These callous feelings and experiences of detachment, manifestations of depersonalization, have been implicated in poor decision making, and impaired client care (Maslach, 2003a; Maslach & Jackson, 1981). Reduced personal accomplishment refers to the "gnawing sense of inadequacy" (Maslach, 2003a, p. 7) employees feel when they are unable to relate to their recipients. Employees, in this stage of burnout, doubt their ability (efficacy) to enact any kind of change, feel as though they cannot do the same job they once could (Halbesleben & Buckley, 2004), and are at risk of giving up on their clients (Maslach & Leiter, 1997).

According to a government survey of the 12 united European Nations, most individuals who experienced stress at work, also complained of burnout; (i.e., 28% felt stress, and 23% reported feeling burnout (Paoli & Merllié, 2005).

Burnout in Direct Care Staff

A large body of knowledge linked job-related stress in human service fields to job-burnout in individual workers (Jenaro et al., 2007; Smith & Moss, 2009). According to Stevens and Higgins, 2002, as cited in (Jenaro et al., 2007), human services workers, individuals who are in daily contact with others, have been found to experience a significant amount of job related stress, and thus are likely to experience a high incidence of job related burnout. Human services workers, sometimes referred to in the literature as direct care staff, include, but are not limited to nurses, teachers, psychiatric staff, foster care workers, in home service providers, those who work with substance abusers, and direct care staff for the mentally ill (Jenaro et al., 2007).

Direct care staff working in group homes with adults who have been diagnosed with chronic mental illnesses are continuously faced with difficult everyday decisions at work, and are routinely expected to manage their own emotions, as well as the emotions and behaviors of their clients. As a result, these staff are highly vulnerable to burnout. Burnout, in turn, contributes to the high rate of employee turnover often observed in direct care staff. Ellett, Ellis, Westbrook, and Dews (2007), for example, cited in their qualitative study of the turnover rates of Children's Protective Service workers, that the national turnover rate of CPS employees in 1999 was 19.9%. The national turnover rate for other child welfare professionals was 19.4%, while the turnover rate of CPS employees in the State of Georgia was 39%. That number reached 44% in 2000.

Burnout in Psychologists

In their review of "Psychologist Impairment," Smith and Moss (2009) examined literature regarding the effectiveness of psychological care. In their review, the authors noted that when distress that causes burnout results in adverse treatment, the psychologist is essentially "impaired." In their review, (Smith & Moss, 2009) cited Mahoney (1997) showed that 43% of

psychologists, almost half, had reported irritability and emotional exhaustion (dimensions of burnout) in the past year, and that 42% of psychologists had reported feelings of reduced personal accomplishment (another dimension of burnout). Smith and Moss (2009) reported that work demands were mostly related to emotional exhaustion, while inadequate job resources were related to detachment from work, and disengagement. Upon their examination of 318 American clinical psychologists, Guy, Polestra, and Stark (1989) found that 37% of the respondents believed that the quality of their care was diminished when they were experiencing burnout. Pope, Tabachnick, and Keith-Spiegel (1987) found that 85% of APA Division 29 members (Psychotherapy) believed that working while burnt out violated the American Psychological Association's ethical principle of beneficence and nonmaleficence which states that "psychologists take care to do no harm" (APA, 2002, p. 1062).

Pakenham and Stafford-Brown (2012) also found that trainees in clinical psychology programs in Australia were under a significant amount of stress and at risk of burnout. They found that the trainee's stress negatively affected their personal and professional lives, and found that as a result, the trainee's clients suffered. According to the authors, training in stress management should be a requirement of University clinical psychology programs because such interventions have been shown to reduce levels of stress and burnout in similar populations (Pakenham & Stafford-Brown, 2012).

Burnout in Social Workers

Hansung (2011) examined 408 social workers in California who worked in either private, or public child welfare settings. He found that stress levels in public settings were significantly higher because of the decreased level of autonomy those workers experienced, as compared to the social workers in private settings, and because of the increased paperwork load placed on the

public employees. According to Hansung (2011), the workers were at a significant risk of burnout, and were highly likely to leave their jobs, thus negatively affecting the children they worked with. He reported that turnover in child welfare positions increased from 19.9% in 2000, to 22.1% in 2004. Hansung (2011), also reported that the increasing rate of burnout was problematic because burnt out employees were likely to make faulty judgments, become angry, display inflexible thinking, become cynical about the treatment they provided, and become cynical towards their agencies.

Burnout in Nurses

Crotty (1987) discussed burnout in the nursing profession, and noted that the syndrome has been identified as an increasing problem within the profession. Jaworek, Marek, Karwowski, Andrzejczak, and Genaidy (2010) reported that nursing was one of the most stressful occupations today. According to the authors, nurses are regularly exposed to conflict with patients and their families, disagreements with management, and differences of opinion with doctors and specialists. The authors also noted that nurses came into regular contact with people who were dying, and in advanced stages of disease, all of which increased their susceptibility to burnout (Jaworek et al., 2010).

Grau-Alberola et al. (2010) used a longitudinal design to estimate the incidence of burnout, over the course of a year, in a sample of 316 nurses working in 13 hospitals in Spain. According to Grau-Alberola et al. (2010), 83.2% of the sample was female (N=262), while 16.8% was male (N=53); the mean age of the sample was 40.39, and all participants had current experience working as a nurse in a hospital. Overall, the researchers found that the level of burnout in this sample of nurses was approximately 2%, which is in line with other burnout research involving nurses (Grau-Alberola et al., 2010). According to the authors, when burnout

was measured as a total score, there was a significant increase in the amount of emotional exhaustion experienced by the staff between time 1 and time 2, and no increase in the perception of depersonalization, or personal accomplishment. When the burnout scores were examined using the 3 subscale scores, on the other hand, burnout was found to have decreased by 0.95% (a factor that the researchers deemed negligible) at time 2 (Grau-Alberola et al., 2010).

According to Crotty (1987), three areas contribute to burnout in nurses; the demands of the particular job (ex. the high demands placed on direct care staff, such as the need for empathy, and time pressure), organizational factors (such as work hours, rate of pay, and supervisor support), and particular characteristics held by the individual (ex. coping resources, attachment, and problem solving). She also outlined four stages of burnout: enthusiasm, stagnation, frustration, and withdrawal. According to Crotty (1987), new employees in helping professions are quite enthusiastic about their work. The second stage, stagnation, becomes evident when the new worker begins to lack in motivation after he/she begins to feel that they are not achieving their goals. The stressful nature of the job, as well as lacking personal resources may exacerbate stagnation. The third stage of frustration is demonstrated by the worker's changing opinion about his/her ability to make a difference. The stage is characterized by lower motivation, and feelings of exhaustion or lack of accomplishment. The final stage, withdrawal, was characterized by poor coping and decision making, as well as feelings of failure. The Direct care staff were thought to progress through the stages rather quickly, within one to two years, of beginning his/her job in the human services field (Crotty, 1987).

Situational Correlates of Burnout

The literature identified specific variables, often found in front line working positions that were associated with burnout in the human services fields. These variables were often

presented as having their effects in situational and dispositional contexts. For example, Leiter and Harvie (1996) reviewed research articles that examined burnout in mental health workers between 1985 and 1995 and found that both dispositional and situational variables played a role in the development of burnout.

A number of situational variables were found in the literature to be associated with burnout. These variables included, but were not limited to: low wages, demanding schedules, and alternating work shifts (Jenaro et al., 2007). Gibbs (2001), and Landsman (2001) as cited in (Jenaro et al., 2007) also pointed to the challenging behaviors of clients as important factors associated with the burnout of staff members in the human services industry.

Acker (2010) reported that the organizational demands of managed care have arisen as main factors leading to stress and burnout among social workers employed in managed care settings, such as group homes. According to Acker (2010), managed care settings became the preferred treatment providers, in mental health care settings, in the United States in the past 2 decades because they promised less expensive mental services in an economy that is experiencing ever decreasing budgets and funding. Acker (2010) stated that the emergence of managed health care and its strict guidelines, cost containment approach, reduced employee autonomy, limited access to services, increased accountability, increased paperwork, and renewing authorizations for ongoing treatment has itself become a new source of workplace stress for social workers in mental health care settings.

As cited in Smith and Moss (2009), Rupert and Morgan (2005), reported that the chief situational determinants of burnout for psychologists were decreased control over decisions at work, longer work hours, increased time completing paper work and other administrative duties,

a smaller number of direct pay clients, behavioral problems in clients, a lack of therapeutic progress, and the increased pressures associated with meeting the demands of managed care.

Dispositional Correlates of Burnout

Although there is a great deal of research that identifies and supports the situational determinants of burnout (Jenaro et al., 2007), less attention has been given to dispositional qualities that lead to the burnout syndrome. A number of researchers, ex. (Crotty, 1987; Moore & Cooper, 1996; Prosser et al., 1997) have found personal factors such as personality, problem solving ability, and coping to be related to burnout status. Moore and Cooper (1996) examined the research on burnout and found that although work and organizational variables contributed to burnout, "individuals bring their personality, their cognitions, their ambitions, indeed their own 'history' to the table, and each environment... is in turn influenced and perceived by the individual" (p. 88).

Coping and burnout.

A major contributor to the experience of burnout is the individual's response to stress (Lee et al., 2011; Malach Pines, 2004; Maslach & Leiter, 1997). In other words, personality, coping, and problem solving styles greatly affect the amount of stress one feels, and thus directly affect the individual's potential for burnout. In their study of child welfare worker retention, Lee et al. (2011) examined the coping strategies of 234 frontline workers in the Department of Human Services-Division of Family and Children Services. The authors found that the staff members who used problem focused coping strategies were less likely to burn out, and were more likely to stay on the job than those who used other types of coping. The authors also found that adequate supervision/leadership, as well as a work culture that promoted collegial support was important in reducing burnout, and retaining employees in human services fields. The

authors suggested that more comprehensive staff training, specifically in the area of problem focused coping, could reduce burnout rates, and improve the quality of care of DHS consumers (Lee et al., 2011).

Chang et al. (2007) cited research that showed that problem-focused coping was associated with fewer instances of maladjustment, while emotion-focused, or avoidant coping was associated with more negative outcomes. Anderson (2000) examined the coping skills of 121 veteran Children's Protective Services workers employed in a South Eastern state. In her sample, the average age of the employees was 40.3 years old; 75% were females, while Caucasians and African Americans each accounted for roughly 50% of the sample. Ninety percent of the sample was college educated, and worked an average of 46 hours per week, for an annual salary of $23,027. These caseworkers held, on average, 30 cases each, had been at their present job for an average of 7.5 years, and most planned to stay at their job indefinitely; only 6.6% planned to leave their jobs in the next 9 months. According to Anderson (2000), coping style played a significant role in the workers' experiences of burnout. According to the authors, the case workers suffered from more emotional exhaustion when they used avoidant coping strategies, and reported experiencing fewer feelings of depersonalization and an increased sense of personal accomplishment when they engaged in problem focused coping at work (Anderson, 2000).

Acker (2010) examined the link between stress and coping by administering a series of questionnaires to a sample of 591 social workers in the state of New York. According to Acker (2010), 89% of the sample had a Master's degree in social work, while 5% had a Doctoral degree. The participants were primarily female, with a mean age of 51. Seventy eight percent of the sample was either married, or in a long-term relationship, 86% of the sample was Caucasian,

and the mean age for employment as a social worker was 22 with a median weekly face-to-face contact hours of 25. Although years of education and intelligence were not examined directly, in this sample of 591 highly educated social workers, the authors found statistically significant correlations between social workers' coping and their levels of burnout after controlling all other variables in their hierarchical regression analysis. According to Acker (2010), the type of coping used (problem focused, emotion focused, and avoidance coping) accounted for the greatest influence on burnout status among the work place variables measured (competence in the managed care setting, social support, caseload size, satisfaction with salary, years of experience practicing social work, age, gender, and race). In this study, the participants' internal resources (i.e., their coping styles) proved to be more important when predicting burnout than the actual situational variables that were also measured. This research helps to reiterate the fact that one's response to stress is more important than the mere existence of stress in one's environment (Acker, 2010). The authors noted that addressing burnout by training staff to cope more productively with their stress can increase employees' effectiveness and thus improve client care in mental health care facilities that are governed by managed care (Acker, 2010).

Andersson, Mavis, and Dean (2000) also examined the relationship between coping and burnout in a sample of 191 general surgery program directors and found that younger program directors with fewer years of experience were more likely to experience more burnout than their older, more experienced counterparts. Furthermore, Andersson et al. (2000) reported that staff age, experience, and perceptions of stressful activities were more related to burnout than the features of the program itself.

Individual perceptions and burnout.

Research has shown that staff's perceptions of their role at work and within their organization were linked to their experiences of burnout. Onyett, Pillinger, and Muijen (1995) examined the variables associated with burnout status in a sample of 445 community mental health team workers in London, England. The sample consisted of 166 psychiatric nurses, 31 other nurses, 69 social workers, 41 administrative staff, 39 occupational therapists, 34 clinical psychologists, 19 psychiatrists, 11 other doctors, 11 generic support workers, 7 specialty therapists, 5 volunteer staff, 3 employment workers, 2 case managers, one counselor, one student nurse, one support worker, and one information technology expert. Sixty two percent of the sample was female. The mean age of the sample was 39.5 years, and the mean years working in the mental health field was 11.6, and the average number of years working with their community mental health team was 2.9 years. Three quarters of the sample worked part time hours, and most worked fewer than 4 days per week. The researchers found, through regression analyses, that social workers generally felt more burnt out, and demonstrated less job satisfaction than the other members of the sample (Onyett et al., 1995). They also found that job satisfaction and burnout were not significantly associated with caseload size (except for the exceptionally large caseloads of psychiatrists who also saw their clients infrequently), caseload composition, or frequency of client contacts. The statistically significant variables that were associated with burnout and job dissatisfaction were: one's feelings about their role on the team, one's feelings about the team's role in mental health, the team members' perceptions of autonomy, the perception of making good use of one's skills, and the perception of being valued by other team members (Onyett et al., 1995). With respect to making good use of one's skills, Hromco, Lyons, and Nikkel (1995) examined the relationship between level of education and job dissatisfaction in a sample of 394

case managers in the state of Oregon. The researchers found that of the case managers who held a Master's degree, 53.3% reported being dissatisfied with their job, while only 29% of the individuals holding Bachelor's degrees reported being dissatisfied. The authors reported that the Master's level case managers were more dissatisfied because they felt as though they were not using the full potential of their training at work, and concluded that University programs should outline reasonable expectations for job tasks in diverse mental health fields (Hromco et al., 1995).

In their 1984 study on 183 Protective Services workers in the State of Michigan, Gillespie and Cohen found that case workers were at most risk of burnout when they felt overloaded with responsibility (large caseloads, too many tasks), had poor communication with their supervisors, and when they perceived a lack of recognition for their efforts from either the families they worked with, or from their supervisors. This finding was consistent with other research linking perceived lack of recognition and accomplishment to burnout (Sas et al., 2011).

Burnout and attachment.

Attachment, a dispositional characteristic, is related to problem solving, coping, and burnout status. For example, Adshead (2010) reviewed the literature that examined the attachment styles and burnout status of medical students and found that an individual's personality characteristics interact with situational workplace demands, and result in the activation of working models which in turn influence problem solving and stress management.

Malach Pines (2004) summarized research showing that most studies of stress and attachment concluded that attachment patterns shaped the coping responses of adults, and that attachment shaped the way adults adjusted to and managed their stress. Malach Pines (2004) also emphasized that research consistently shows that securely attached individuals positively

appraise stressful situations and cope with them constructively, while insecurely attached individuals fail to use constructive coping techniques, and suffer more consequences of maladjustment and subsequently, burnout.

Malach Pines (2004) conducted five separate studies, each with different populations of various cultures, socioeconomic status', and occupations, and found correlations between attachment style and burnout. She found that "the more secure one's attachment style, the less likely one is to burnout," and conversely, "the less secure one's attachment style, the more likely one is to burn out" (Malach Pines, 2004 , pg. 76). She first passed an attachment and burnout questionnaire out to 41 MBA students. Next, she demonstrated the correlations in a nonstudent sample of 216 human services workers. The sample consisted of educated, Israeli, dialysis nurses whose mean age was 40.6 years, and who were on the job for an average of 10 years. Another sample of 751 Hungarian social studies students was used to ensure that the results were not unique to Israelis. The next study was of a randomly selected representative sample of the Jewish population in Israel. The sample consisted of 511 individuals, 237 men, and 274 women, all of whom were 18 years old. On a 7-point Likert scale ranging from 1) Very Poor, to 7) Very Rich, 15 % described themselves as poor or very poor, while 75% described their economic situation as average, and 10 % described themselves as rich, or very rich. Finally, attachment and burnout was assessed in the same manner in an Arab population living in Israel (n=505; 191 men, 314 women). According to the author, the minority Arab population was a "distinct cultural group." In all five studies, Malach Pines (2004) found positive correlations between the two insecure attachments and burnout, with anxious attachment having higher burnout rates than avoidant attachment, and a negative correlation between secure attachment and burnout. Moreover, the researcher found that secure attachment was correlated with using problem focused strategies to

manage stress, while anxious attachment was correlated with emotion focused problem solving strategies, and "obsessing about the problem," while avoidant attachment was positively correlated with avoiding the problem. Furthermore, Malach Pines (2004) found no significant correlations between gender and burnout, and found that burnout was not associated with age, education, marital status, or social status. Burnout was associated, on the other hand, with economic status. The mean burnout score for those who identified themselves as very poor (15%) was 3.1, while the mean burnout score for the remaining 85% of the subjects was 2.7 (Malach Pines, 2004).

Ronen and Baldwin (2010b) also examined the link between attachment and burnout. Based on the research conducted by Malach Pines (2004), Ronen and Baldwin (2010b) hypothesized that insecurely attached individuals, and especially anxiously attached individuals, would be at a significant risk of becoming burnt out at work because of their tendency to be hypersensitive about social relationships. Ronen and Baldwin (2010b) used structural equation modeling to examine the relationships between the 3 dimensions of burnout (emotional exhaustion, depersonalization, and personal accomplishment) and attachment in a sample of 231 hotel employees, at a at a hotel network in Israel. The sample consisted of 31% waiters, 6% barmen, 37% valet staff, and 26% receptionists; 37% were men, while 63% were women; the mean age of the employees was 24.34; and, the average level of education amongst the employees was 12.69 years. The results of the study revealed that (a) participants' hypersensitivity to social rejection significantly predicted their level of burnout; (b) The sensitivity to social rejection demonstrated by the anxiously attached individuals completely mediated the link between attachment anxiety and future stress; (c) Hypersensitivity to social rejection completely mediated the link between attachment anxiety and burnout; and (d)

Approximately 64% of the variance in future burnout was explained by anxious attachment. The -results of the study indicated that personality variables, in this case anxious attachment, related to an individual's experience of stress and burnout.

Vanheule and Declercq (2009) examined the relationship between burnout and attachment in a sample of 530 Belgian security guards. The sample consisted of mostly men (85.40%), with a mean age of 39.87 years; 51.6% were married. Vanheule and Declercq (2009) found that secure attachment was negatively correlated with burnout, and that burnout was positively related to the fearful and preoccupied attachment styles. These styles corresponded respectively with the avoidant and anxious attachment styles (Vanheule & Declercq, 2009).

Ronen and Mikulincer (2009) examined the indirect effects that were related to burnout in a sample of 393 employees from 49 area businesses in Israel. Sixty percent of the population was male, and 40% of the population was female. The mean age of the participants was 29.77 years, and the average level of education was 13.22 years. On average, the participants had been working at their jobs for 5.30 years. Using structural equation modeling, Ronen and Mikulincer (2009) found that higher levels of attachment anxiety and avoidance were associated with higher levels of burnout at work. The researchers also found that the insecurely attached individuals were more likely to appraise two contextual variables (organizational fairness and team cohesion) negatively. Lower levels of perceived organizational fairness were found to mediate the relationship between attachment avoidance and burnout fully. Lower levels of perceived team cohesion were found to partially mediate the relationship between attachment anxiety and burnout (Ronen & Mikulincer, 2009). The researchers concluded that in this study, the employees drew upon their negative internal working models of the self and others (anxiety and avoidance), and biased their appraisals of the contextual variables. These biased appraisals

accounted for the employee burnout (Ronen & Mikulincer, 2009). Thus, the attachment driven appraisals of the employees' environments were more important than the environments themselves when it came to experiencing burnout. The researchers posited that with biased attachment driven appraisals, the insecurely attached employees were likely to react in similar fashions in any stressful situation since attachment orientations are generalizable across situations (Ronen & Mikulincer, 2009). To combat this, the researchers emphasized the importance of stress mitigation training, and positive problem solving, as well as of greater and more consistent supervisor support, and the importance of emphasizing greater organizational fairness and team cohesion (Ronen & Mikulincer, 2009).

Meredith, Strong, and Feeney (2006) examined the role that attachment (personality) played on perceptions of pain in a convenience sample of 58 Australian graduate students. Overall, 22 students were male and 36 were female, with a mean age of 36 years. Meredith et al. (2006), hypothesized that because attachment is antecedent to affects, behaviors, and cognitions, the attachment system becomes activated under induced pain (stress caused by submerging one's arm in icy water). According to the researchers, attachment anxiety was related to higher perceptions of pain, more catastrophizing, stress, depression, and diminished perceptions of control over pain. Attachment security was conversely related with less catastrophizing, depression, and more perceptions of control over pain (Meredith et al., 2006).

Burnout and problem solving.

Problem solving and coping skills have been extensively researched in the burnout literature for obvious reasons. In general, more effective coping/problem solving skills improve the individual's ability to stave off stress and burnout (D'Zurilla et al., 2004; Maslach, 2003a).

In a study of social problem solving, daily stress, and adjustment in a sample of 259 undergraduate students, Bell and D'Zurilla (2009) found that higher levels of stress were associated with more significant levels of maladjustment, and that social problem solving mediated and moderated the link between daily life stress and adjustment. D'Zurilla and Sheedy (1991) used a prospective design to determine which problem solving factors would predict psychological distress in a sample of college students at the end of their fall semester. The researchers administered the Social Problem Solving Inventory, and a stress measure to a sample of college students (N = 127; 50 males; 77 females; mean age = 19.9 years) at the beginning of their fall semester, and the stress measure again three months later, before final examinations. The researchers controlled for the variance associated with the other life problems that were identified when the students first filled out the social problem solving inventory. The results of the study indicated that social problem solving ability was significantly negatively related to future stress (D'Zurilla & Sheedy, 1991).

Costs of Burnout to Businesses

Burnout costs businesses a great deal of financial resources annually (Hogan & McKnight, 2007; Zapf, 2002). Financial losses resulting from high employee turnover in child welfare, for example, mount from losses incurred due to the training of staff who leave the company, retraining of new staff, differential productivity between new and old employees, and recruitment costs (Ellett et al., 2007). These same authors reported that, on average, it takes a child welfare worker 2 years to become independently competent and comfortable with the work. Bruce (2009) cited research showing that burnout was implicated in low employee productivity, more sick days, lower profits, loss of important employee talents, and damaged corporate reputations.

There is also evidence of a phenomenon known as 'Burnout Contagion' where individuals from the same work groups become "infected" with burnout and began displaying similarly high levels of the characteristics associated with burnout syndrome (Zapf, 2002). When direct care staff began exhibiting apathy, depersonalization, and cynicism, they were putting the recovery and treatment of a vulnerable population at risk.

<center>**Problem Solving in the Real World**</center>

D'Zurilla and Goldfried (1971) developed a theory of problem solving in the real world which they purported to be the most important coping strategy in terms of maintaining positive adjustment in real world situations (D'Zurilla, Maydeu-Olivares, & Gallardo-Pujol, 2011). The theory, first proposed in (1971) by D'Zurilla and Goldfried was later revised by D'Zurilla, Nezu, and Maydeu-Olivares in 1982 (as cited in D'Zurilla & Nezu, 1990). In their Social Problem Solving Model, D'Zurilla and Nezu (1999) suggested that social problem solving was a type of coping strategy that played a central role in increasing an individual's ability to reduce, and manage stress and its negative consequences across a wide range of situations. The adjective "social" was not meant to restrict problem solving to any type of specific problem, but to emphasize that problem solving occurred in everyday social environments, and that problem solving was considered to be a social learning process, and a social skill (D'Zurilla & Nezu, 1990). Social Problem Solving itself, was defined as a self-directed cognitive-behavioral process in which an individual identifies and implements adaptive coping strategies in their everyday lives (D'Zurilla, Maydeu-Olivares, & Kant, 1998). According to this view, social problem solving is an active, conscious, effortful, and purposeful coping technique that can enhance one's ability to manage a wide range of everyday stressors (D'Zurilla & Chang, 1995). Therefore, it can be concluded that coping involves problem solving, but not all coping is directed at solving

problems. Some forms of coping are directed at managing affect, while others are directed at avoiding the stress altogether (D'Zurilla & Chang, 1995).

The latest iteration of the Social Problem Solving theory (D'Zurilla et. al, 1982) conceptualizes social problem solving as having two dimensions: A) Problem Solving *Orientation*, and B) Problem Solving *Style* (D'Zurilla, Maydeu-Olivares, & Gallardo-Pujol, 2010). Problem Solving Orientation is the motivational component of problem solving that represents how an individual thinks and feels about problem solving in general, as well as how that individual thinks about his/her own problem solving ability (Belzer, D'Zurilla, et al., 2002). Problem solving orientation may be either positive or negative in nature. Problem Solving Style refers to the cognitive-behavioral strategies (problem solving skills) that one uses to cope with their problem. Three problem solving styles have been outlined in the literature (rational problem solving style, avoidance problem solving style, and impulsivity/carelessness style) (Zumberg, Chang, & Sanna, 2008).

Thus, in total, D'Zurilla and Goldfried's (1971;1982) theory identifies five social problem solving dimensions:

1. *Positive Problem* Orientation is a characteristic way of looking at problems that includes (a) a propensity to appraise problems as challenges which may lead to personal benefits or gains, (b) a belief that problems are solvable, and (c) belief in one's own problem solving efficacy;

2. *Negative Problem* Orientation is a characteristic way of solving problems in which a person (a) views problems as significant threats to their wellbeing, (b) has poor coping efficacy, i.e., doubts their abilities to successfully solve their problems, and (c)

becomes easily frustrated when he/she encounters problems which are impinging upon their ability to successfully achieve their goals;

3. *Rational Problem Solving Style* involves the systematic application of rational, deliberate, or effective problem solving skills;

4. *Impulsivity/Carelessness Style* is characterized by the hurried, impulsive, careless, narrow, and incomplete application of problem solving techniques; and,

5. *Avoidance Style*, is characterized by procrastination, passivity or inaction, and dependency (D'Zurilla et al., 2004).

Three social problem solving dimensions reflect dysfunctional problem solving attempts: Negative Problem Orientation, Impulsivity/Carelessness Styles, and Avoidance Style, while two social problem solving dimensions are considered to be constructive: Positive Problem Orientation, and Rational Problem Solving (D'Zurilla, Maydeu-Olivares, & Gallardo-Pujol, 2011). The model also identifies 4 major problem solving skills: (a) problem definition and formulation, (b) generation of alternative solutions, (c) decision making (judgment and evaluation of solutions), and (d) the evaluation of the solution outcome (D'Zurilla, Maydeu-Olivares, et al., 1998).

Intelligence and Social Problem Solving

The literature that relates intelligence scores to social problem solving, or "real life" problem solving ability consistently demonstrates non-significant, or low correlations between the two. Of the studies that did demonstrate low correlations, individuals with very low IQ scores demonstrated low scores on social problem solving ability, whereas individuals with very high IQ scores showed more variable social problem solving scores. The implication is that very low intelligence may set a limit on social problem solving ability; however, higher intelligence scores

do not necessarily imply the use of more productive real life problem solving strategies (T. D'Zurilla, personal communication, May 25, 2012).

Problem Solving/Coping and Attachment

In the past 30 years, an emerging line of research indicated that individuals' attachment styles directly influenced their coping and problem solving ability. Attachment in general is known to mediate coping, problem solving, stress responses, health, and psychological well-being (Daniel, 2006). Mikulincer et al. (1993) reported that attachment theory is a relevant and valid framework for understanding one's efficacy for coping with stressful situations.

According to Mikulincer et al. (1993), Bowlby emphasized in 1980 that secure attachment, and a positive internal working model, enhanced individuals' coping skills, and feelings of self-worth and self-efficacy. These skills and feelings worked to reduce the experience of anxiety, and bolstered one's ability to generate and execute constructive problem solving strategies across the life span. Insecure individuals, on the other hand, were more likely to use emotion focused coping (anxiously attached individuals), and avoidance coping (avoidantly attached individuals).

Mikulincer et al. (1993) examined attachment styles, coping strategies, and posttraumatic psychological distress in a sample of 140 Israeli students who were interviewed two weeks after surviving an Iraqi missile attack on Israel in the Gulf War. According to the authors, "insecure attachment in adulthood, as in infancy, placed individuals at risk for a variety of problems with which they were poorly equipped to cope" (Mikulincer et al., 1993 p. 818). The authors found that the three groups, secure, avoidant, and anxious/ambivalent attachment, did not differ in their use of problem focused coping strategies, albeit, this was probably because they had been coached beforehand on how to survive such an attack. They also found that compared with

securely attached students, those who were anxiously attached used more emotion focused coping strategies, and those who were avoidantly attached used more distancing/avoidance style coping (Mikulincer et al., 1993; Mikulincer & Shaver, 2003). This research was in line with other current literature that stated that avoidant individuals problem solved by diverting negative emotions from their awareness, while anxious individuals tended to be hypervigilant to the source of the stress, and problem solved by using emotion focused, or careless strategies (Harms, 2010, 2011; Hazan & Shaver, 1990; Malach Pines, 2004; Mikulincer & Florian, 1995). Mikulincer et al. (1993) went on to state that the secure adults benefited from their secure base experiences that were gained in childhood in the form of a strong sense of control and self-efficacy which lead to attributions of difficult situations as manageable. These life adversities were then solved via constructive problem solving/coping techniques. On the other hand, adults with insecure attachments had negative internal working models that were developed by inconsistent and unsupportive parents who may have done a poor job of regulating their distress. In the face of adversity, these adults were left with feelings of personal inadequacy, and were likely to label a stressful situation as threatening, irreversible, and uncontrollable. Their problem solving techniques focused upon relieving negative feelings, alleviating perseveration (anxiously attached), or mentally or physically escaping from the situation altogether (avoidantly attached). Mikulincer et al. (1993) also stressed that emotional distress was not simply a component of insecure attachment. Instead, they argued that attachment styles had a direct effect on coping. In terms of a diathesis-stress, insecure attachment acted as a predispositional factor to the level of emotional distress experienced during a stressful situation (Mikulincer et al., 1993; Mikulincer & Shaver, 2003).

Mikulincer and Florian (1995) studied real time coping and problem solving in a sample of 92, eighteen year old, male military recruits who were completing a highly stressful 4 month combat training that was part of their mandatory military service in Israel. In order to control some methodological issues present in their 1993 study, (i.e., the data was collected two weeks retrospectively, and the cross-sectional design) the authors examined attachment patterns before the training, and examined their problem solving/coping ability at the completion of training. By examining the attachment and problem solving patterns in real time, at two different points rather than concurrently, the authors were able to interpret the possible prospective contribution of attachment in relation to coping and problem solving in a stressful situation more effectively. Mikulincer and Florian (1995) found that the anxiously attached soldiers were more likely than their securely attached counterparts to use emotion focused coping, were more likely to appraise their training as threatening, judged themselves as less capable of coping with the training, and were evaluated by their peers as less suitable for positions of military leadership. Avoidantly attached soldiers were found to use more avoidance coping, were less likely to seek support from others, and appraised the training in more threatening terms than the securely attached soldiers; however, they did not differ from those who were securely attached in their self-reported perceived ability to cope with the training. According to the authors, avoidantly attached individuals have consistently been shown to exhibit a false sense of security, which upon becoming threatened is met with avoidance coping (Mikulincer & Florian, 1995). Mikulincer and Shaver (2003) outlined newer research that once again shows that securely attached adults were likely to use constructive problem focused coping strategies when managing their distress. Anxiously attached adults were likely to use careless emotion focused strategies that had been shown to exacerbate, rather than alleviate the experience of distress. Finally, avoidantly attached

adults were likely to escape adversity by using avoidance coping techniques that involved mental and physical avoidance and withdrawal from distress (Mikulincer & Shaver, 2003).

Social Problem Solving and Burnout

According to Eliott et al. (1996), employee burnout stemmed from inefficient social problem solving skills. Eliott et al. (1996) maintained that negative problem solving orientations hindered problem solving attempts, and placed the individual at risk for developing burnout over time, and reinforced their negative problem solving orientation. Negative problem solving orientation also disrupted individuals' ability to effectively regulate their emotions, and disrupted their ability to think rationally (Grant et al., 2006). Conversely, positive problem solving orientation was associated with lower affectivity. The lower affectivity promoted a sense of control over problems, and was associated with problem focused coping strategies, and avoidance of impulsive problem solving strategies (Eliot & Marmarosh, 1994). In their study, Eliott et al. (1996) examined the problem solving orientations of 98 nurses in three hospitals in the United States. Eighty-six of the participants were women, 12 were men, and their average age was 38.33 years. The researchers found that nurses with positive problem solving orientations had more confidence in their problem solving abilities, and were less likely to burnout than their peers who had negative problem solving orientations and tended to cope with work stressors using emotion focused coping strategies (Eliott et al., 1996).

Eliot and Marmarosh (1994) examined social problem solving appraisals (problem solving orientation) health complaints, and health related expectancies in a sample of 321 undergraduate psychology students in an urban state University. They found that students who had more positive self-appraisals also had more positive expectations regarding health concerns. The authors concluded that problem solving therapies should address the individual's problem

solving style by emphasizing skill building in 5 broad areas: (a) problem solving orientation; (b) problem definition and formulation; (c) generation of alternative solutions; (d) decision making; and (e) evaluation of the solution. Elliott et al. (1995) also found, in a sample of 94 undergraduate psychology students that a positive problem solving orientation was significantly associated with greater positive mood on a daily basis, heightened positive mood during final examinations, and lower negative mood when recalling stressful situations. Since social problem solving orientation affects the experience of negative affect, this component of social problem solving is especially important when considering the negative affectivity associated with insecure attachment styles (Westcott, 1995).

Mediation Analysis

According to MacKinnon, Fairchild, and Fritz (2007), mediation analysis is used when attempting to determine if a predictor variable is significantly related to the mediating variable, which in turn is significantly related to the criterion variable. Mediating variables can be "behavioral, biological, psychological, or social constructs that transmit the effect of one variable to another" (p. 594). Baron and Kenny (2012) have suggested that a mediation analysis is a causal model, with the mediator thought to cause the outcome. Mediation should not be considered a statistical analysis; instead, statistical analyses are used to assess the mediation model.

Mediation reflects how a third variable (mediator) affects the relationship between two variables (predictor and criterion). Figure 2 presents a graphical representation of mediation analysis. Mediation models use a four-step process to test the effects of the mediator on the relationship between the predictor and criterion variable. Baron and Kenny (2012) have described the steps in detail:

1. Determine that the predictor variable and the criterion variable are significantly related using regression analysis. The purpose of this step is to establish a relationship between the predictor and criterion variable. If the relationship between the two variables is not statistically significant, mediation analysis cannot be continued.

2. Examine the relationship between the predictor variable and the mediating variable. The mediating variable in this step is treated as the criterion variable. If the relationship between the predictor variable and the mediator variable is not statistically significant, the mediation analysis cannot be continued.

3. Using the mediator variable as the predictor variable, determine the significance of the relationship between the mediator variable and the criterion variable. If the relationship between the mediator variable and the criterion variable is not statistically significant, the mediation analysis cannot be continued.

4. If the first three steps have been met, the mediating variable is held constant and the relationship between the predictor and criterion variable is tested. The purpose of this step is to determine the extent to which the amount of explained variance (R^2) is decreased from the initial step. The amount of explained variance should be zero (not statistically significant).

If after completing the four steps, the conclusion can be made that the mediating variable is consistent with the alternative hypothesis, a true mediation is the result. If the first three steps are met, but the amount of explained variance remains statistically significant, then a partial mediation is the result. A Sobel's test can be used to determine if the partial mediation is statistically significant. See Appendix A for a graphic representation of the mediation model.

The present study tested the mediating effect of attachment on the relationship between problem solving and burnout. On the first step of the mediation, the relationship between positive problem orientation (a subscale of problem solving) and emotional exhaustion (a subscale of burnout) was tested. If a statistically significant relationship is found, then the analysis progresses to the second step. Using positive problem solving orientation as the predictor variable and anxious attachment as the criterion variable, multiple regression will be used to determine if the relationship between the two variables will be statistically significant. If a statistically significant outcome is achieved, the analysis progresses to the third step. Anxiety as a subscale of adult attachment will be used as the predictor variable and emotional exhaustion will be used as the criterion variable. The results of the multiple regression analysis should be statistically significant. If this result is statistically significant, the fourth step is completed. Using a hierarchical multiple regression, anxiety as a measure of adult attachment is entered first, with emotional exhaustion used as the criterion variable. Positive problem orientation will be entered into the regression equation. The results of this analysis should result in a nonsignificant relationship between the predictor variable (positive problem orientation) and the criterion variable (emotional exhaustion) after holding anxious attachment (mediating variable) constant. If the amount of explained variance on Step 4 is substantially reduced from Step 1, although the relationship has remained statistically significant, a partial mediation may be the best explanation. Using a Sobel's test can determine if the mediating variable (anxiety as a measure of adult attachment) is partially mediating the relationship between the predictor variable (positive problem orientation) and the criterion variable (emotional exhaustion). These four steps are repeated for each of the subscales measuring burnout, problem solving, and attachment.

Chapter III

Methodology

This chapter presented an overview of the methodology that was used to collect and analyze data needed to address the research questions and test the hypotheses developed for the study. The topics that are included in this chapter are a restatement of the problem, research design, setting for the study, participants, instruments, data collection procedures, and data analysis.

Restatement of the Purpose

The purpose of this study was to determine if problem solving abilities and avoidant and anxious attachment are related to burnout among staff working with chronically mentally ill clients living in group homes in a metropolitan county in a large Midwestern state.

Research Design

A nonexperimental, correlational research design was used in this study. This type of study is used when there is no experimental treatment or interventions provided to the participants. A correlational research design is used to examine relations among variables at a particular point in time. The primary data collection tools were surveys or questionnaires that obtained information on the dependent variables (burnout) and the independent variables (problem solving ability and adult attachment style).

Setting for the Study

The study took place in a large county in a metropolitan area located in a Midwestern state. Group homes that house individuals who have been diagnosed with a severe, chronic mental illness in the county are managed by a group home consortium. This organization provides services to adults with chronic and severe mental illnesses. At the time of the study, the

consortium ran 32 group homes in the county. The homes are located in residential areas and have been modified to meet the physical limitations of the clients. The homes have three to four bedrooms, with two clients per room. Approximately six to eight clients live at each home, and each home has between 8 and 10 staff who are responsible for the care of the clients. Some staff travel among the homes when staff shortages or conflicts in scheduling occur. The recommended staff ratio is one worker for every two clients, but this is neither enforced legally nor contractually. Contractually, staff ratios should never exceed one staff member for every 12 group home residents (Michigan, 1996).

Participants

The population for this study consisted of employees of group homes that served individuals who have been diagnosed with a chronic mental illness. The employees worked directly with the severely chronically mentally ill. A non-exhaustive list of staff responsibilities includes, but is not limited to: transportation for residents to and from appointments; medication administration; some meal preparation; some home cleaning; conflict resolution between group home residents; implementation of person centered plans and behavior plans; planning of activities; mentoring; some redirecting of behaviors; management of severe psychological symptoms and their consequences; some crisis intervention; and, monitoring of suicidal ideation.

The group homes have personnel on site 24 hours per day, seven days per week. Each home might have a minimum of three employees per day, one on each shift: days, afternoons, and midnights. However, most homes had more than three employees on each shift, with some employees circulating to different homes as contingent employees. The employees have at least a high school diploma or a GED as a requirement for employment. During their tenure at the group home, they are expected to have on-going training for CPR, corporate compliance, recipients'

rights, behavior management, and medication administration. Neither the quality nor the quantity of the training is an issue in this study.

Sample

The participants in the study were a cross-section of employees at all of the group homes belonging to the particular consortium. A minimum of 55 group home workers were asked to participate in the study. These employees must be over 18 years of age and able to read and comprehend English. Participants were not excluded from the study based on race or gender. Supervisors and group home managers were excluded from the study as their work responsibilities may be different from the group home workers.

Sample Size.

To determine the appropriate sample size for the study, a power analysis was completed using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009). With an effect size of .15, two tailed test, alpha level of .05, and 7 predictor variables, a sample of 55 participants would be adequate to attain a power of .80. Additional participants could increase the power of the analysis. A graph of the power analysis for power ranging from .60 to .95 is presented in Figure 3 of Appendix A.

<div align="center">

Instruments

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Four instruments, the Social Problem Solving Inventory – Revised Short Form (SPSI-R:S) developed by D'Zurilla, Nezu, and Maydeu-Olivares (2002); the Maslach Burnout Inventory-Human Services Survey (MBI-HS) developed by Maslach, Jackson, and Leiter (1996), the Experiences in Close Relations – Short Form (ECR-SF) developed by Wei, Russell, Mallinckrodt, and Vogel (2007); and, a short demographic survey developed by the researcher

were used in this study. With the exception of the demographic survey, each of the instruments was previously tested for reliability and validity in previous research.

Social Problem Solving Inventory – Revised – Short Form (SPSI-R:S; D'Zurilla, 2002).

The SPSI-R:S was developed by D'Zurilla et al. (2002) to determine the extent to which an individual is able to identify and develop adaptive solutions for problems encountered in daily life. The scale has two domains: problem solving orientation and problem solving style. The SPSI-R:S measures five dimensions of social problem solving: (a) positive problem orientation, (b) negative problem orientation, (c) rational problem solving, (d) impulsivity/carelessness, and (e) avoidance. The rational problem solving scale is further divided into four subscales: (a) problem definition and formulation, (b) generation of alternative solutions, (c) decision making, and (d) solution implementation and verification. The first two dimensions (positive and negative problem orientation) are used to measure the first domain, with the remaining three scales (rational problem solving, impulsivity/carelessness, and avoidance) measuring the second domain. Sample items on each of the five scales include:

1. Whenever I have a problem, I believe it can be solved.

2. I feel nervous and unsure of myself when I have an important decision to make.

3. When I have a decision to make, I try to predict the positive and negative consequences of each option.

4. I am too impulsive when it comes to making a decision.

5. I spend more time avoiding my problems than solving them.

The original form of the instrument includes 52 items that measure these dimensions. A short form of the scale that includes 25 items measures the same five dimensions, but does not include

the specific subscales of rational problem solving. For the purpose of the present study, the 25 items scale will be used. Table 1 presents the items on each of the subscales.

Table 1

Social Problem Solving Inventory – Revised: Short Form Subscales and Reliability

Subscale	Items on Subscale	Internal Consistency	Test-Retest
Positive problem orientation	4, 5, 9, 13, 15	.79	.72
Negative problem orientation	1, 3, 7, 8, 11	.80	.79
Rational problem solving	12, 21, 16, 19, 23	.88	.74
Impulsivity/Carelessness style	2, 14, 20, 24, 25	.78	.72
Avoidance style	6, 10, 17, 18, 22	.89	.73
SPSI-R:S		.93	.84

Scoring.

Each item on the inventory is rated using a 5-point Likert type scale, ranging from 0 for not at all true of me to 4 for extremely true. The scores are summed to obtain a total score. The total score for each scale will be divided by 5 (the number of items on each scale) to obtain a mean score. The use of a mean score provides a score that reflects the original unit of measure.

Reliability.

The reliability of the instrument was determined by calculating Cronbach alpha coefficients to measure internal consistency (D'Zurilla et al., 2002). The obtained alpha coefficients ranged from .79 to .93 for middle-aged adults, indicating the scale had good to excellent internal consistency as a measure of reliability. The stability of the instrument was examined using Pearson product moment correlations to test the relationship between two administrations of the instrument at a 3-week interval. The obtained correlations ranged from .72 to .84, providing evidence of the stability of the instrument as a measure of reliability.

Validity.

Construct validity was assessed using a principal components factor analysis with a varimax rotation. Five factors, (a) positive problem orientation, (b) negative problem orientation, (c) rational problem solving, (d) impulsivity/carelessness, and (e) avoidance scale, emerged from the factor analysis. The eigenvalues associated with each of the five factors were greater than 1.00, providing evidence that each factor was accounting for a statistically significant amount of variance in the latent variable, social problem solving.

The scores for each of the five subscales on the SPSI-R:S were correlated with measures of depression, anxiety, hopelessness, suicidality, and life satisfaction to determine the concurrent validity of the instrument. The correlations between the five subscales and each of the variables were statistically significant and in the anticipated direction, indicating the instrument had good concurrent validity.

Maslach Burnout Inventory-Human Services Survey (MBI-HS; Maslach Jackson and Leiter, 1996)

The Maslach Burnout Inventory (Maslach et al., 1996) is used to measure three components of burnout: emotional exhaustion, depersonalization, and personal accomplishment. The MBI is available in three versions: human services, general, and educator's survey. For the purpose of the present study, the human services version will be used. The scale can be completed in 10 to 15 minutes.

Sample items on the MBI-HS include:

- I feel emotionally drained from my work.
- I feel used up at the end of the work day.
- I've become more callous toward people since I took this job.

- I have accomplished many worthwhile things in this job.

The scale uses 22 items to measure the three components of burnout. Table 2 presents the subscales and definitions, along with the items included on each subscale.

Table 2

Subscale Definitions and Items

Subscale	Definition	Items on Subscale
Emotional exhaustion	Feelings of being emotionally overextended and exhausted by work	1, 2, 3, 6, 8, 13, 14, 16, 20
Depersonalization	Unfeeling and impersonal response toward recipients of one's service, care, treatment, or instruction	5, 10, 11, 15, 22
Personal accomplishment	Feelings of competence and successful achievement in one's work with people	4, 7, 9, 12, 17, 18, 19, 21

Maslach, Jackson, & Leiter, 1996

Scoring.

The frequency of occurrence of the items on the scale is rated by the participant using a 7-point scale ranging from 0 for never to 6 for every day. The numeric values are summed for each subscale to obtain a total score. The total scores are then divided by the number of items on the scale to obtain a mean score. The use of a mean score provides a value that is in the original unit of measure and allows comparisons across the three subscales measuring burnout.

Because burnout is conceptualized as a continuous variable, one can determine that an individual's burnout score is low, moderate, or high. High scores correspond with the upper third of the normal curve, while moderate scores correspond with the middle third, and low burnout scores correspond with the lower third of the normal curve of burnout scores.

Reliability.

The MBI has been used extensively in prior research. Maslach et al. (1996) reported the results of Cronbach coefficient alpha completed with a sample of 1,316 people. The alpha

coefficients for the three subscales were: emotional exhaustion (.90), depersonalization (.79), and personal accomplishment (.71). Maslach et al. (1996) also tested the MBI for stability using test-retest data. The coefficients obtained for each of the subscales were: emotional exhaustion (.82), depersonalization (.60), and personal accomplishment (.80). Jackson, Schwab , and Schuler (as cited in Maslach et al., 1996) reported test-retest correlations of .60 for emotional exhaustion, .54 for depersonalization, and .57 for personal accomplishment. Similar results were obtained by Lee and Ashforth (as cited in Maslach et al., 1996).

Validity.

A principal components factor analysis using an orthogonal rotation was used to verify the three factor structure of the MBI. The three factors that emerged were accounting for a statistically significant amount of variation in the latent variable, burnout. A confirmatory factor analysis was used to validate the results of the exploratory factor analysis (Lee & Ashforth as cited in Maslach et al., 1996). Convergent validity was assessed by comparing the survey results with behavioral ratings made by a co-worker or a relative. Statistically significant relationships were found between the depersonalization subscale scores and co-workers ratings, but the relationships between emotional exhaustion and personal accomplishment with co-workers ratings were not statistically significant. When a relative (e.g., wife) rated her spouse, the correlations with the three subscales on the MBI were in the anticipated direction. To determine if the MBI was different from other psychological measures, the MBI was correlated with job satisfaction. Small, negative statistically significant correlations were obtained for emotional exhaustion and depersonalization, while a nonsignificant correlation in a positive direction was obtained for personal accomplishment. Maslach et al. (1996) reported that the scores on the MBI

could be skewed by social desirability because some items on the scale are divergent from professional principles.

Experiences in Close Relations – Short Form (ECR-S; Wei, Russell, Mallinckrodt, & Vogel, 2007)

The Experiences in Close Relations – Short Form was developed to measure adult attachment in terms of anxiety and avoidance. According to Mikulincer, Shaver , and Perg (2003), anxiety is defined as a fear of rejection or abandonment by others, need for others' approval, and increased stress when a partner is unavailable or unresponsive. The authors defined avoidance as a fear of being dependent on another person, and an increased need to be self-reliant and reluctant to self-disclose. The original scale, developed by Brennan, Clark, and Shaver (1998), had 36 items, 18 measuring anxiety and 18 measuring avoidance. Wei et al. (2007) developed the short form using items from Brennan et al. (1998) original scale. The original 36 items were reduced to 12 items, with 6 items measuring anxiety and 6 measuring avoidance. Retention of the items was based on the use of a principal components factor analysis and a careful review of the 18 items on each scale. The items on each scale were reviewed to remove items that appeared to have similar wording. The reason for developing the short form was to decrease the time required to complete the instrument without substantially affecting the reliability and validity of the original instrument.

Scoring.

The 12 items on the ECR-S are rated using a 7-point Likert scale with a 1 indicating strongly disagree and 7 indicating strongly agree. A neutral point of 4 is provided to allow participants to answer even if they have no strong feelings about an item. After reverse scoring the positively worded items, the numeric values associated with each item are summed to obtain

a total score. The total score is divided by 6 to provide a mean score that reflects the original scale of measurement. Higher scores on this scale reflect greater anxiety and avoidance. Table 3 presents the item numbers on each scale.

Table 3

Scale Items

Subscale	Items on Subscale
Anxiety	2, 4, 6, 8 (reverse), 10, 12
Avoidance	1 (reverse), 3, 5 (reverse), 7, 9 (reverse), 11

Wei et al., 2007

Although the ECR-S has been used extensively in prior research (M. Wei, personal communication, November 25, 2012), no information is available on the norms for the two scales (M. Wei, personal communication, November 25, 2012). Therefore, in determining the categories for adult attachment, a median split on the data will be used to determine high and low anxiety and high and low avoidance.

Since the 12 items are scored on a 7-point Likert scale, one can plot the scores of attachment anxiety and attachment avoidance on a 7 X 7 graph for descriptive purposes. See Table 4 for the quadrants that will be used to determine categories of attachment.

Table 4

Categories of Attachment

	Low Anxiety	High Anxiety
Low Avoidance	Secure (Q1)	Preoccupied (Q2)
High Avoidance	Dismissing/Avoidant (Q3)	Fearful/Avoidant (Q4)

When the coordinates of the scores fall in quadrant 1, the individual is considered to have a secure attachment. When the plotted scores fall into quadrant 2, the individual is considered to have a preoccupied attachment. When the scores fall into quadrant 3, the individual is demonstrating dismissing attachment, and when the scores fall into the fourth quadrant, the individual is considered to be displaying a fearful attachment. See Appendix A for the graphical representation of the four quadrants of adult attachment.

Considering that attachment is best conceptualized as a measure of degree, rather than a measure of kind (Personal Cmmunication Fraley, 2012), higher plots in any quadrant represent greater degrees of attachment. The categories that are derived from the sample in the present study will be used for descriptive purposes only. To address the research questions and test the hypotheses, the scaled scores for anxiety and avoidance measured on the ECR-S will be used; not the descriptive categories.

Reliability.

The alpha coefficients from both the ECR and ECR-S were compared to determine if reducing the scale from 36 items to 12 items materially affected the internal consistency of the instrument. The alpha coefficients for the 36-item ECR were .92 for anxiety and .93 for avoidance. Conversely, the alpha coefficients for the 12-item ECR-S were .78 for anxiety and .84 for avoidance. While Wei et al. (2007) acknowledged that the alpha coefficients were lower for the short scale, they were still considered acceptable for use in research.

In testing the correlations between the scales on both the ECR and ECR-S forms of the scale, the results indicated that the short form scales had a correlation of .19, while the original 36 item version had a correlation of .17. The correlations between the two forms of the ECR

were considered equivalent. These correlations also provided support that both forms of the ECR were measuring different constructs (anxiety and avoidance).

Validity.

A confirmatory factor analysis was used to determine the construct validity of the ECR-S. Wei et al. (2007) tested four different models to verify the construct validity. The results of these analyses supported the two factor (anxiety and avoidance) model, indicating a good fit to the data.

The correlations for the 6-item anxiety scale were statistically significant and in the anticipated direction. Correlation for avoidance and excessive reassurance seeking was not statistically significant and was in a negative direction. The correlations between avoidance and the two depression measures were statistically significant and in a positive direction. According to Wei et al. (2007), these results provided support for the convergent validity of the instruments. Based on the studies by Wei et al. (2007), the short form of the ECR appears to have adequate reliability and validity.

Demographic Survey

A short demographic survey was used to obtain information about the personal characteristics of the group home workers. The items included on the survey are age, gender, ethnicity, marital status, number of children, highest level of completed education, presently working towards higher education, position in the home, length of time working in the mental health field, length of time working in group homes for the mentally ill, length of time working in the particular group home, completion of training for working with the mentally ill, number of jobs, number of hours worked per week, and number of hours worked per week at the particular home. The participants used a combination of forced-choice and fill-in the blank responses. The

information obtained from this instrument was used for descriptive purposes and as independent variables in addressing the research questions developed for the study.

Data Collection Methods

After receiving approval to conduct the study from the Human Investigation Committee (HIC) at Wayne State University, the researcher began data collection procedures. A meeting was arranged with the group home consortium president to explain the purposes and procedures of the present study. To invite individuals to participate in the present study, a list of group home managers was obtained from the president. The names of the group homes were placed in a hat, and contacted in the order in which they are drawn.

The group home managers were contacted by the investigator to arrange for a convenient time for the investigator to visit each group home and introduce the study to the staff. The staff was informed that participation was voluntary and that they were free to withdraw from the study at any time. They were not remunerated for their participation. Additionally, steps taken to protect participants' confidentiality and privacy were explained. The researcher did not have a list of the direct care staff prior to entering each home. As a result, he was unable to code the instruments before distributing them to the volunteers. The researcher did not code the specific group homes. By not coding the instruments, or the group homes, the anonymity of the participants was assured.

After explaining to the staff that their personal information would not be identifiable in any way, and that they could choose to end their participation at any time, the researcher distributed survey packets to the group home workers who volunteered to participate in his study. The survey packets included a copy of the information sheet along with counter-balanced copies of all instruments to be completed by the participants. The volunteers were asked to read

the information sheet, but were not required to sign or return this form. By completing and returning the surveys, the participant was giving implied consent to participate in the study. The participants were asked to return their surveys to the researcher, in the envelope in which they were received, or to place their sealed envelopes in the locked drop-box, which were left at the home and picked up in seven days. The researcher returned to each group home one week after initial distribution of the surveys to pick up the drop-box and thank the staff for their participation in his study.

Group home managers and supervisors were excluded from this study as their work duties might differ from those of the direct care staff. The researcher left additional survey packets with the group home managers who agreed to distribute surveys to workers on the afternoon and midnight shifts. The group home managers were asked to share with prospective staff volunteers that they would not have access to the data, and that there was no obligation for the group home staff to participate, or complete the surveys once they have begun. For homes in which group home managers did not agree to distribute the surveys to other shifts, the researcher visited the homes, either early in the morning, or late in the evening, when midnight staff were leaving, or arriving at the home. The information sheet instructs staff who did not return the packets to the researcher directly, to seal the surveys in the provided envelope, draw some "X's" over the seal, and deposit the envelope into the drop box for later retrieval.

Data Analysis

The data from the surveys were entered into a data file for analysis using IBM-SPSS ver. 20.0. The analysis was divided into three sections. The first section used frequency distributions and measures of central tendency and dispersion to provide a profile of the participants. The second section used descriptive statistics to provide baseline data on the scaled variables in the

study. Inferential statistical analyses, including stepwise multiple linear regression analysis, Pearson product moment correlations, and mediation analyses were used in the third section to address the research questions and test the associated hypotheses. All decisions on the inferential statistical analyses were made using a criterion alpha level of .05. Table 5 presents the statistical analyses that were used to address each of the research questions.

Table 5

Statistical Analyses

Research Question/Hypotheses	Variables	Statistical Analysis
1. Can burnout be predicted from avoidant and anxious attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting? H_1: Burnout can be predicted from avoidant and anxious attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting. H_{01} Burnout cannot be predicted from avoidant and anxious attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.	<u>Criterion Variables</u> Burnout • Emotional exhaustion • Depersonalization • Personal accomplishment <u>Predictor Variables</u> Attachment • Anxiety • Avoidance Problem Solving • Positive problem orientation • Negative problem orientation • Rational problem solving style • Impulsivity/Carelessness style • Avoidance style	Separate stepwise multiple linear regression analyses were used to determine which of the predictor variables can be used to predict the criterion variables. Prior to conducting the stepwise multiple linear regression analysis, Pearson product moment correlations were used to determine which of the predictor variables are significantly correlated with the criterion variables. Only those predictor variables that are significantly correlated with the criterion variables were used in the stepwise multiple linear regression analysis.
2. Does adult attachment, as measured by anxiety and avoidance, mediate the relationship between problem solving ability and burnout among staff who are working with chronically mentally ill clients in a group home setting? H_2: Adult attachment, as measured by anxiety and avoidance, mediates the relationship between problem solving ability and burnout among staff who are working with chronically mentally ill clients in a group home setting. H_{02}: Adult attachment, as measured by anxiety and avoidance, does not mediate the relationship between problem solving ability and burnout among staff who are working with chronically mentally ill clients in a group home setting.	<u>Criterion Variable</u> Burnout • Emotional exhaustion • Depersonalization • Personal accomplishment <u>Predictor Variables</u> Problem Solving • Positive problem orientation • Negative problem orientation • Rational problem solving style • Impulsivity/Carelessness style • Avoidance style <u>Mediating Variables</u> Attachment • Anxiety • Avoidance	Mediation analyses were used to determine if attachment is mediating the relationship between burnout and problem solving. The mediation analysis used the four-step process developed by Baron and Kenny (2011): 1. Determine if the predictor variable is significantly related to the criterion variable 2. Determine if the predictor variable is significantly related to the mediating variable 3. Determine if the mediating variable is significantly related to the criterion variable 4. Determine the change in the relation between the predictor variable and the criterion variable while holding the mediating variable constant. If the relation between the predictor and criterion variable becomes non-significant when holding the mediating variable constant, the result is a full mediation

Research Question/Hypotheses	Variables	Statistical Analysis
3. Can burnout be predicted from personal characteristics of the direct care staff (age, gender, marital status, educational level, presently working toward higher education) and organizational characteristics (hours worked per week, length of time working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population)? H_3: Burnout can be predicted from personal characteristics of the direct care staff (age, gender, marital status, educational level, presently working toward higher education) and organizational characteristics (hours worked per week, length of time working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population). H_{03}: Burnout cannot be predicted from personal characteristics of the direct care staff ((age, gender, marital status, educational level, presently working toward higher education) and organizational characteristics (hours worked per week, length of time working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population).	Criterion Variables Burnout • Emotional exhaustion • Depersonalization • Personal accomplishment Predictor Variables • Age • Gender • Marital status • Educational level • Working toward higher education • Total hours worked per week • Hours worked at group home • Length of time working with chronically mentally ill patients • Length of time in group home • Participation in training for working with this population	Separate stepwise multiple linear regression analyses were used to determine which of the predictor variables could be used to predict burnout among group home workers. Prior to conducting the stepwise multiple linear regression analysis, Pearson product moment correlations were used to determine which of the predictor variables are significantly correlated with the criterion variables. Only those predictor variables that were significantly correlated with the criterion variables were used in the stepwise multiple linear regression analysis.

CHAPTER 4

RESULTS OF DATA ANALYSIS

The results of the data analyses used to describe the sample and address the research questions are presented in this chapter. The chapter is divided into three sections. The first section uses frequency distributions and measures of central tendency and dispersion to provide a description of the sample. The second section uses descriptive statistics to provide baseline information on the scaled variables. An intercorrelation matrix of all scaled variables are presented in the second section. Inferential statistical analyses used to test the hypotheses are presented in the third section of the chapter.

This study examined the nature of the indirect effects that the direct care worker's attachment systems and problem solving abilities have on their burnout status. A contemporary psychodynamic theory, attachment theory, was used to outline the underlying psychodynamic foundations of personality to improve the quality of service for a vulnerable population (i.e., group home residents). By gaining a deeper understanding of the complexities of the interactions between the construct sub-components, the researcher obtained important information related to the treatment of people diagnosed with chronic mental illness. This information could be used as a first step towards providing a better standard of care for a vulnerable population, and may save taxpayers money.

Description of the Sample

Approximately 180 direct care workers were employed in a group home consortium in a large metropolitan county in a Midwestern state. All of the direct care workers were invited to participate in the study. Of this number, 117 direct care workers completed and returned surveys for a response rate of 65.0%.

The participants completed a short demographic survey that was developed by the researcher. The participants provided their ages on the survey. Descriptive statistics were used to summarize their responses. Table 6 presents results of this analysis.

Table 6

Descriptive Statistics – Age of Participants

				Range	
Number	Mean	SD	Median	Minimum	Maximum
116	33.49	12.18	29.50	19	70

Missing   1

The mean age of the participants was 33.49 (sd = 12.18) years, with a median of 29.50 years. The ages of the participants ranged from 19 to 70 years. One participant did not provide a response to this question.

The participants provided their gender and ethnicity on the survey. Frequency distributions were used to summarize the responses for presentation in Table 7.

Table 7

Frequency Distributions – Gender and Ethnicity of the Participants (N = 117)

Gender and Ethnicity	Number	Percent
Gender		
Male	50	43.5
Female	65	56.5
Missing 2		
Ethnicity		
African American	29	25.4
Asian/Pacific Islander	4	3.5
Caucasian	54	47.5
Hispanic	7	6.1
Middle Eastern/Arabic	1	0.9
Multi-ethnic	7	6.1
Native American/Alaskan Native	12	10.5
Missing 3		

The majority of the participants (n = 65, 56.5%) reported their gender as female. Two participants did not provide their gender on the survey. The largest group of direct care workers (n = 54, 47.5%) indicated their ethnicity was Caucasian, with 29 (25.4%) reporting their ethnicity was African American. Three participants did not provide a response to this question.

The participants provided their marital status and the number of children on the demographic survey. Their responses were summarized using frequency distributions. Table 8 presents results of this analysis.

Table 8

Frequency Distributions – Marital Status and Number of Children of the Participants (N = 117)

Marital Status and Number of Children	Number	Percent
Marital Status		
Married	38	32.8
Single	57	49.1
Divorced	14	12.1
Other	7	6.0
Missing 1		
Number of Children		
None	46	43.0
1 to 2	41	38.4
3 to 4	14	13.0
5 to 6	6	5.6
Missing 10		
Presently in a romantic relationship		
Yes	67	68.4
No	31	31.6
Missing 19		

The largest group of participants (n = 57, 49.1%) reported their marital status as single, with 38 (32.8%) indicating they were married. Fourteen (12.1%) participants were divorced and 7 (6.0%) indicated their marital status as "other." Forty-six (43.0%) of the participants indicated they had no children and 41 (38.4%) had between one and two children. Ten participants did not provide a response to this question. The majority of participants (n = 67, 68.4%) reported that they were in a romantic relationship. Nineteen participants did not provide a response to this question.

The educational level of the participants was obtained on the demographic survey. The responses were summarized using frequency distributions. Table 9 presents results of this analysis.

Table 9

Frequency Distributions – Educational Level of the Participants (N = 117)

Educational Level	Number	Percent
Educational Level		
High school graduate	22	18.8
GED	13	11.1
Some college/Technical school	47	40.2
Associate degree	24	20.5
Bachelor degree	10	8.5
Graduate degree	1	0.9
Working towards a higher education level		
Yes	48	44.0
No	61	56.0

Twenty-two (18.8%) participants indicated they had obtained a high school, with 13 (11.1%) reporting they had a GED. Forty-seven (40.2%) participants had completed some college or technical school and 24 (20.5%) had an associate degree. Ten (8.5%) of the participants had a bachelors degree. When asked if they working towards a higher level of education, 48 (44.0%) indicated they were and 61 (56.0%) were not working towards a higher level of education.

The participants were asked about their work history in group homes. Their responses were summarized using descriptive statistics. Table 10 presents results of this analyses.

Table 10

Descriptive Statistics – Work History in Group Homes

Work History	N	Mean	SD	Median	Minimum	Maximum
						Range
Years worked in mental health field	117	6.54	7.11	4.00	1	40
Years worked in group homes	117	4.50	4.18	3.00	1	25
Years worked in present group home	117	2.91	2.90	2.00	1	20

The mean number of years that the participants had worked in the mental health field ranged from 1 to 40 years, with a median of 4 years. The mean number of years worked in the mental health field was 6.54 (sd = 7.11) years. The participants had worked in group homes for a mean of 4.50 (sd = 4.18) years, with a median of 3 years. The range of time in group homes was from 1 to 25 years. The mean length of time that the participants had worked in their present group home was 2.91 (sd = 2.90) years, with a median of 2 years. The range of time worked in their present group home was from 1 to 20 years.

The participants were asked about their employment at the group home. Their responses were summarized using frequency distributions. Table 11 presents results of this analysis.

Table 11

Frequency Distributions – Employment (N = 117)

Employment	Number	Percent
Only job		
Yes	90	76.9
No	27	23.1
Hours worked in total		
More than 40	42	35.9
Between 30 and 40	44	37.6
Between 20 and 30	24	20.5
Between 10 and 20	6	5.1
Less than 10	1	0.9
Hours worked in home		
More than 40	29	24.8
Between 30 and 40	48	41.0
Between 20 and 30	31	26.5
Between 10 and 20	8	6.8
Less than 10	1	0.9

Ninety (76.9%) of the participants reported that their only job was in their current group home. The remaining 27 (23.1%) reported that they had other jobs beside their current group

home. When asked to indicate the number of hours they worked in a week at all jobs, 42 (35.9%) reported they worked more than 40 hours a week, with 44 (37.6%) indicating they worked between 30 and 40 hours a week. Twenty-four (20.5%) of the participants worked between 20 and 30 hours per week. Twenty-nine (24.8%) participants indicated they worked more than 40 hours in their present group home, with 48 (41.0%) reporting they worked between 30 and 40 hours a week. Between 20 and 30 hours a week was indicated by 31 (26.5%) of the participants.

Scaled Variables

The participants' responses to the three measures; the Social Problem Solving Inventory – Revised Short Form (SPSI-R:S) developed by D'Zurilla et al. (2002); the Maslach Burnout Inventory-Human Services Survey (MBI-HS) developed by Maslach et al. (1996), the Experiences in Close Relations – Short Form (ECR-SF) developed by Wei et al. (2007); were scored using the author's instructions. Descriptive statistics were used to summarize the mean scores for each of the subscales on the measures. Table 12 presents results of this analysis.

Table 12

Descriptive Statistics – Scaled Measures (N = 117)

| | | | | | Range of Actual Scores | | Range of Possible Scores | |
Scale	N	M	SD	Median	Minimum	Maximum	Minimum	Maximum
Social Problem Solving Inventory								
Positive problem orientation	117	2.63	.85	2.75	0.00	4.00	0.00	4.00
Negative problem orientation	117	1.24	.89	1.00	0.00	3.80	0.00	4.00
Rational problem orientation	117	2.37	.83	2.40	0.00	4.00	0.00	4.00
Impulsivity/carelessness	117	1.18	.83	1.20	0.00	3.20	0.00	4.00
Avoidance problem solving	117	1.17	.88	1.00	0.00	3.80	0.00	4.00
Total Score	117	1.71	.45	1.71	0.00	3.48	0.00	4.00
Maslach Burnout Inventory-Human Services Survey								
Emotional exhaustion	117	2.30	1.75	2.11	0.00	6.00	0.00	6.00
Depersonalization	117	1.38	1.22	1.20	0.00	4.20	0.00	6.00
Personal accomplishment	117	3.85	1.45	3.88	0.00	6.00	0.00	6.00
Experiences in Close Relations – Short Form								
Anxiety	117	3.38	1.29	3.33	1.00	7.00	1.00	7.00
Avoidance	117	2.60	1.15	2.50	1.00	5.50	1.00	7.00

The range of scores for the Social Problem Solving Inventory total score and subscales was from 0.00 to 4.00, with higher scores indicating greater problem solving for positive problem orientation, and rational problem solving. Higher scores for impulsivity/carelessness and avoidance problem solving reflected lower problem solving. Higher scores for the total score were indicative of greater problem solving.

Possible mean scores for the Maslach Burnout Inventory – Human Services Survey could range from 0.00 to 6.00. Higher scores for emotional exhaustion and depersonalization were indicators of greater burnout, while higher scores for personal accomplishment were reflective of greater personal accomplishment.

The Experiences in Close Relations – Short Form had scores that could range from 1 to 7. Higher scores for both the anxious and avoidance subscales indicated greater anxiety or avoidance in close relationships.

An intercorrelation matrix was developed to examine the relationship among the scaled variables. Table 13 presents results of this analysis.

Table 13

Intercorrelation Matrix – Scaled Variables (N = 117)

Scaled Variables	Scaled Variables										
	1	2	3	4	5	6	7	8	9	10	11
1	--										
2	-.38**	--									
3	.58**	-.28**	--								
4	-.25**	.59**	-.29**	--							
5	-.44**	.65**	-.39**	.61**	--						
6	.13	.73**	.19*	.71**	.64**	--					
7	-.09	.34**	-.13	.36**	.29**	.34**	--				
8	-.34**	.33**	-.33**	.25**	.28**	.11	.35**	--			
9	-.23*	.33**	-.27**	.20*	.27**	.16	.15	<.01	--		
10	-.26**	.34**	-.42**	.26**	.31**	.13	-.22*	.11	.76**	--	
11	.44**	-.32**	.53**	-.22**	-.36**	-.02	-.08	-.15	-.43**	-.54**	--

*p < .05; **p < .01
Note: 1 Positive problem orientation; 2 Negative problem orientation; 3 Rational problem solving; 4 Impulsivity/carelessness; 5 Avoidance problem solving; 6 Total Social Problem Solving Inventory; 7 ECR Anxiety; 8 ECR Avoidance; 9 Emotional exhaustion; 10 Depersonalization; 11 Personal accomplishment

Statistically significant correlations were obtained between positive problem orientation and negative problem orientation (r = -.38, p < .01), rational problem solving (r = .58, p < .01), impulsivity/carelessness (r = -.25, p < .01), avoidance problem solving (r = -.44, p < .01), ECR avoidance (r = -.34, p < .01), emotional exhaustion (r = -.23, p < .05), depersonalization (r = -.26, p < .01), and personal accomplishment (r = .44, p < .01). The correlations between negative

problem orientation and rational problem solving (r = -.28, p < .01), impulsivity/carelessness (r = .59, p < .01), avoidance problem solving (r = .65, p < .01), total social problem solving inventory (r = .73, p < .01), ECR anxiety (r = .34, p < .01), ECR avoidance (r = .33, p < .01), emotional exhaustion (r = .33, p < .01), depersonalization (r = .34, p < .01), and personal accomplishment (r = -.32, p < .01) were statistically significant. Rational problem solving was significantly related to impulsivity/carelessness (r = -.29, p < .01), avoidance problem solving (r = -.39, p < .01), total social problem solving inventory (r = .19, p < .05), ECR avoidance (r = -.33, p < .01), emotional exhaustion (r = -.27, p < .01), depersonalization (r = -.42, p < .01), and personal accomplishment (r = .53, p < .01). Statistically significant correlations were obtained between impulsivity/carelessness and avoidance problem solving (r = .61, p = .01), total social problem solving inventory (r = .71, p < .01), ECR anxiety (r = .36, p < .01), ECR avoidance (r = .25, p < .01), emotional exhaustion (r = .20, p < .05), depersonalization (r = .26, p < .01), and personal accomplishment (r = -.22, p < .01). Avoidance problem solving was significantly related to total social problem solving inventory (r = .64, p < .01), ECR anxiety (r = .29, p < .01), ECR avoidance (r = .28, p < .01), emotional exhaustion (r = .27, p < .01), depersonalization (r = .31, p < .01), and personal accomplishment (r = -.36, p < .01). The correlations between ECR anxiety and ECR avoidance (r = .35, p < .01) and depersonalization (r = -.22, p < .05) were statistically significant. Emotional exhaustion was significantly correlated with depersonalization (r = .76, p < .01) and personal accomplishment (r = -.43, p < .01). The correlation between depersonalization and personal accomplishment (r = -.54, p < .01) was significantly correlated.

Research Questions and Hypotheses

Three research questions and associated hypotheses were developed for this study. Inferential statistical analyses were used to test the hypotheses and address the research questions. All decisions on the statistical significance of the outcomes were made using a criterion alpha level of .05.

Research question 1: Can burnout be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting?

H_{1a}: Emotional exhaustion can be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

H_{01a}: Emotional exhaustion cannot be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

Separate stepwise multiple linear regression analyses were used to determine if burnout could be predicted from Anxious and Avoidant attachment and problem solving ability among staff who were working with chronically mentally ill clients in a group home setting. The first analysis used emotional exhaustion as the criterion variable. Table 14 presents results of this analysis.

Table 14

Stepwise Multiple Linear Regression Analysis – Emotional Exhaustion with Anxious and Avoidant Attachment and Problem Solving Ability

Predictor Variable	Constant	b-Weight	β-Weight	Δr^2	t-Value	Sig
Included Variables						
Negative Problem Orientation	1.47	.69	.35	.12	4.04	<.001
Excluded Variables						
ECR Anxiety			.01		.10	.923
ECR Avoidance			-.12		-1.31	.195
Positive Problem Orientation			-.09		-.87	.385
Rational Problem Solving			-.17		-1.84	.069
Impulsivity/Carelessness			-.06		-.49	.622
Avoidance Problem Solving			.26		.26	.794

Multiple R	.35
Multiple R2	.12
F Ratio	16.35
DF	1, 115
Sig	<.001

One predictor variable, negative problem solving, entered the stepwise multiple linear regression equation, accounting for 12% of the variance in emotional exhaustion, $F(1, 115) = 16.35$, $p < .001$. The positive relationship between negative problem orientation and emotional exhaustion provide support that as participants use greater negative problem orientation, they may be more likely to become emotionally exhausted. The remaining predictor variables did not enter the stepwise multiple linear regression equation, indicating they were not statistically significant predictors of emotional exhaustion.

H_{1b}: Depersonalization can be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

$H_{01b:}$ Depersonalization cannot be predicted from Anxious and Avoidant attachment and

problem solving ability among staff who are working with chronically mentally ill clients

in a group home setting.

A stepwise multiple linear regression analysis was used to determine if depersonalization as a

measure of burnout could be predicted from anxious and avoidant attachment and problem

solving. The results of this analysis are presented in Table 15.

Table 15

Stepwise Multiple Linear Regression Analysis – Depersonalization with Anxious and Avoidant Attachment and Problem Solving Ability

Predictor Variable	Constant	b-Weight	β-Weight	Δr^2	t-Value	Sig
Included Variables						
Rational Problem Solving	2.10	-.49	-.33	.18	-3.81	<.001
Negative Problem Orientation		.36	.27	.06	3.07	.003
Excluded Variables						
ECR Anxiety			.08		.95	.345
ECR Avoidance			-.10		-1.16	.251
Positive Problem Orientation			.10		.92	.357
Impulsivity/Carelessness			-.02		-.20	.841
Avoidance Problem Solving			-.04		-.31	.756

Multiple R	.49
Multiple R2	.24
F Ratio	16.35
DF	2, 114
Sig	<.001

Two predictor variables, rational problem solving and negative problem orientation,

entered the stepwise multiple linear regression equation, explaining 24% of the variance in

depersonalization, F (2, 114) = 16.35, p < .001. Rational problem solving entered the stepwise

multiple linear regression equation first, accounting for 18% of the variance in depersonalization, $\beta = -.33$, $t = -3.81$, $p < .001$. The negative relationship between rational problem solving and depersonalization provided support that direct care staff who were more likely to use rational problem solving were more likely to have lower scores for depersonalization. Negative problem orientation entered the stepwise multiple linear regression equation, explaining and additional 6% of the variance in depersonalization, $\beta = .27$, $t = 3.07$, $p = .003$. The positive relationship between negative problem orientation and depersonalization indicated that participants who had higher scores for negative problem orientation tended to have higher scores for depersonalization. The remaining predictor variables did not enter the stepwise multiple linear regression equation, indicating they were not statistically significant predictors of depersonalization.

H_{1c}: Personal accomplishment can be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

H_{01c}: Personal accomplishment cannot be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

A stepwise multiple linear regression analysis was used to determine if personal accomplishment could be predicted from anxious and avoidant attachment and social problem solving. The results of this analysis are presented in Table 16.

Table 16

Stepwise Multiple Linear Regression Analysis – Personal Accomplishment with Anxious and Avoidant Attachment and Problem Solving Ability

Predictor Variable	Constant	b-Weight	β-Weight	Δr^2	t-Value	Sig
Included Variables						
Rational Problem Solving	2.54	.77	.44	.29	5.51	<.001
Negative Problem Orientation		-.44	-.27	.06	-3.33	.001
Excluded Variables						
ECR Anxiety			.10		1.18	.240
ECR Avoidance			.10		1.16	.250
Positive Problem Orientation			.07		.67	.505
Impulsivity/Carelessness			.17		1.64	.103
Avoidance Problem Solving			.02		.15	.883

Multiple R	.59
Multiple R2	.35
F Ratio	30.36
DF	2, 114
Sig	<.001

Thirty-five percent of the variance in personal accomplishment was explained by two predictor variables, rational problem solving and negative problem orientation, F (2, 114) = 30.36, p <.001. Rational problem orientation entered the stepwise multiple linear regression equation first, explaining 29% of the variance in personal accomplishment, β = .44, t = 5.51, p <.001. The positive relationship between personal accomplishment and rational problem solving indicated that direct care workers who had higher levels of rational problem solving were more likely to have higher scores for personal accomplishment. An additional 6% of the variance in personal accomplishment was accounted for by negative problem orientation, β = -.27, t = -3.33, p =.001. The negative relationship between personal accomplishment and negative problem orientation provided support that participants who had higher scores for negative problem orientation tended to have lower scores for personal accomplishment. The remaining predictor

variables did not enter the stepwise multiple linear regression equation, indicating they were not statistically significant predictors of personal accomplishment.

Based on the statistically significant results for the three stepwise multiple linear regression analyses, the null hypothesis of no relationships between burnout, anxious and avoidant attachment, and social problem solving was rejected. Negative problem orientation was a statistically significant predictor of emotional exhaustion, depersonalization, and personal accomplishment, with rational problem solving a statistically significant predictor of depersonalization and personal accomplishment. All of the statistically significant relationships were in the expected directions.

Research Question 2. Does adult attachment, as measured by anxiety and avoidance, mediate the relationship between problem solving ability and burnout among staff who are working with chronically mentally ill clients in a group home setting?

H_2: Adult attachment, as measured by anxiety and avoidance, mediates the relationship between problem solving ability and burnout among staff who are working with chronically mentally ill clients in a group home setting.

H_{02}: Adult attachment, as measured by anxiety and avoidance, does not mediate the relationship between problem solving ability and burnout among staff who are working with chronically mentally ill clients in a group home setting.

Mediation analyses were used to determine if anxious and avoidant attachment were mediating the relationships between burnout and social problem solving. The mediation analysis used the four-step process described by Baron and Kenny (2012):

1. Determine if the predictor variable is significantly related to the criterion variable
2. Determine if the predictor variable is significantly related to the mediating variable

3. Determine if the mediating variable is significantly related to the criterion variable

4. Determine the change in the relation between the predictor variable and the criterion variable while holding the mediating variable constant.

If the relation between the predictor and criterion variable becomes nonsignificant when holding the mediating variable constant, the result is a full mediation. Table 17 presents results of the mediation analysis using emotional exhaustion as the criterion variable, total score for social problem solving as the predictor variable, and anxiety as the mediating variable.

Table 17

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Emotional Exhaustion and Social Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Emotional Exhaustion	Social Problem Solving	.03	3.10	.16ns

*p < .05; **p < .01

The relationship between social problem solving and emotional exhaustion was tested on the first step of the mediation analysis. The results of this analysis were not statistically significant, β = .16, F = 3.10, p = .081. Because of the nonsignificant findings on the first step, the mediation analysis could not be continued.

Emotional exhaustion was used as the criterion variable in a mediation analysis, with positive problem orientation used as the predictor variable and anxious attachment used as the mediating variable. Table 18 presents results of this analysis.

Table 18

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Emotional Exhaustion and Positive Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Positive Problem Orientation	Emotional Exhaustion	.05	6.58	-.23**
Step 2				
Positive Problem Orientation	Anxious Attachment	.01	.64	-.07ns

*p < .05; **p < .01*

On the first step of the mediation analysis, positive problem orientation was explaining a statistically significant amount of variance in emotional exhaustion, R^2 = .05, β = -.23, F = 6.58, p = .012. The relationship between positive problem orientation and anxious attachment tested on the second step of the mediation analysis was not statistically significant, R^2 = .01, β = -.07, F = .64, p = .426. The mediation analysis could not be continued because of the lack of a statistically significant finding on the second step.

A mediation analysis was used to determine if anxious attachment was mediating the relationship between emotional exhaustion and negative problem orientation. Table 19 presents results of this analysis.

Table 19

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Emotional Exhaustion and Negative Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Negative Problem Orientation	Emotional Exhaustion	.12	16.35	.35**
Step 2				
Negative Problem Orientation	Anxious Attachment	.15	21.01	.39**
Step 3				
Anxious Attachment	Emotional Exhaustion	.02	2.52	.15ns

*p < .05; **p < .01

Twelve percent of the variance in emotional exhaustion was explained by negative problem orientation on the first step of the mediation analysis, β = .35, F = 16.35, p <.001. On the second step of the mediation analysis, negative problem orientation accounted for 15% of the variance in anxious attachment, β = .39, F = 21.01, p < .001. The relationship between anxious attachment and emotional exhaustion, tested on the third step of the mediation analysis, was not statistically significant, R^2 = .02, β = .15, F = 2.52, p = .115. Because of the nonsignificant findings on the third step, the mediation analysis could not be continued.

Emotional exhaustion was used as the criterion variable in a mediation analysis, with rational problem solving used as the predictor variable. Anxious attachment was used as the mediating variable in this analysis. Table 20 presents results of this analysis.

Table 20

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Emotional Exhaustion and Rational Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Rational Problem Solving	Emotional Exhaustion	.07	8.91	-.27**
Step 2				
Rational Problem Solving	Anxious Attachment	.02	1.93	-.13ns

*p < .05; **p < .01

Seven percent of the variance in emotional exhaustion was explained by rational problem solving on the first step of the mediation analysis, β = -.27, F = 8.91, p < .001. On the second step of the mediation analysis, rational problem solving was not a statistically significant predictor of anxious attachment, R^2 = .01, β = -.13, F = 1.93, p =.168. Because of the nonsignificant finding on the second step, the mediation analysis could not be continued.

A mediation analysis was completed using emotional exhaustion as the criterion variable, with impulsivity/carelessness used as the predictor variable. Anxious attachment was used as the mediating variable in this analysis. Table 21 presents results of this analysis.

Table 21

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Emotional Exhaustion and Impulsivity/Carelessness

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Impulsivity/Carelessness	Emotional Exhaustion	.04	4.97	.20*
Step 2				
Impulsivity/Carelessness	Anxious Attachment	.13	16.87	.36**
Step 3				
Anxious Attachment	Emotional Exhaustion	.02	2.52	.15ns

*p < .05; **p < .01

On the first step of the mediation analysis, 4% of the variance in emotional exhaustion was explained by impulsivity/carelessness, R^2 = .04, β = .20, F = 4.97, p =.028. The relationship between impulsivity and anxious attachment, tested on the second step of the mediation analysis, was statistically significant, R^2 = .10, β = .36, F = 16.87, p < .001. The third step of the mediation analysis tested the relationship between anxious attachment and emotional exhaustion. The results of this step were not statistically significant, R^2 = .02, β = .15, F = 2.52, p = .115. Because the relationship on the third step was not statistically significant, the mediation analysis could not be continued.

Emotional exhaustion was used as the criterion variable, with avoidance problem solving used as the predictor variable in a mediation analysis. Anxious attachment was used as the mediating variable in this analysis. Table 22 presents results of this analysis.

Table 22

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Emotional Exhaustion and Avoidance Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Avoidance Problem Solving	Emotional Exhaustion	.08	9.27	.27**
Step 2				
Avoidance Problem Solving	Anxious Attachment	.09	10.77	.29**
Step 3				
Anxious Attachment	Emotional Exhaustion	.02	2.52	.15ns

*p < .05; **p < .01

On the first step of the mediation analysis, 8% of the variance in emotional exhaustion was accounted for by avoidance problem solving, R^2 = .08, β = .27, F = 9.27, p = .003. Nine percent of the variance in anxious attachment was explained by avoidance problem solving on

the second step of the mediation analysis, $R^2 = .09$, $\beta = .29$, $F = 10.77$, $p < .001$. On the third step of the mediation analysis, the relationship between anxious attachment and emotional exhaustion was not statistically significant, $R^2 = .02$, $\beta = .15$, $F = 2.52$, $p = .115$. The mediation analysis could not be continued because of the nonsignificant finding on the third step.

A mediation analysis was used to determine if anxious attachment was mediating the relationship between depersonalization and total social problem solving. Table 23 presents results of this analysis.

Table 23

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Depersonalization and Social Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Social Problem Solving	Depersonalization	.02	1.98	.13ns

*$p < .05$; **$p < .01$

Two percent of the variance in depersonalization was accounted for by social problem solving, $R^2 = .02$, $\beta = .13$, $F = 1.98$, $p = .162$. As a result of the nonsignificant finding on the first step, the mediation analysis could not be continued.

Depersonalization was used as the criterion variable in a mediation analysis, with positive problem solving used as the predictor variable. Anxious attachment was used as the mediating variable in this analysis. Table 24 presents results of this analysis.

Table 24

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Depersonalization and Positive Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
<u>Step 1</u>				
Positive Problem Orientation	Depersonalization	.07	8.49	-.26**
<u>Step 2</u>				
Positive Problem Orientation	Anxious Attachment	.01	.64	-.07ns

*p < .05; **p < .01

On the first step of the mediation analysis, positive problem orientation was accounting for 7% of the variance in depersonalization, R^2 = .07, β = -.26, F = 8.49, p = .004. The relationship between positive problem orientation and anxious attachment tested on the second step of the mediation analysis was not statistically significant, R^2 = .01, β = -.07, F = 0.64, p = .426. The mediation analysis could not be continued due to the nonsignificant finding on the second step of the mediation analysis.

A mediation analysis was used to determine if anxious attachment was mediating the relationship between depersonalization and negative problem orientation. Table 25 presents results of this analysis.

Table 25

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Depersonalization and Negative Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Negative Problem Orientation	Depersonalization	.14	19.13	.38**
Step 2				
Negative Problem Orientation	Anxious Attachment	.15	21.01	.39**
Step 3				
Anxious Attachment	Depersonalization	.05	5.76	.22*
Step 4				
Anxious Attachment	Depersonalization	.05	5.76	.22*
Negative Problem Orientation		.10	9.93	.35**
Sobel's Test = 2.12, p = .016				

*p < .05; **p < .01

Fourteen percent of the variance in depersonalization was explained by negative problem orientation on the first step of the mediation analysis, R^2 = .14, β = .38, F = 19.13, p < .001. On the second step of the mediation analysis, anxious attachment was accounting for 15% of the variance in anxious attachment, R^2 = .15, β = .39, F = 21.01, p < .001. The relationship between anxious attachment and depersonalization, tested on the third step of the mediation analysis was statistically significant, R^2 = .05, β = .22, F = 5.76, p = .018. After holding anxious attachment constant on the fourth step of the mediation analysis, the amount of variance in depersonalization accounted for by negative problem orientation decreased from .14 (Step 1) to .10 (Step 4), R^2 = .10, β = .35, F = 9.93, p < .001. To determine if the indirect effect of the predictor variable on the dependent variable through the mediator variable is significant, Sobel's test was calculated. The obtained test statistic of 2.12 (p = .016) was statistically significant, indicating that anxious attachment was partially mediating the relation between depersonalization and negative problem orientation.

A mediation analysis was used to determine if anxious attachment was mediating the relationship between depersonalization (criterion variable) and rational problem solving (predictor variable). The results of this analysis are presented in Table 26.

Table 26

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Depersonalization and Rational Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Rational Problem Solving	Depersonalization	.18	24.67	-.42**
Step 2				
Rational Problem Solving	Anxious Attachment	.02	1.93	-.13ns

*p < .05; **p < .01

On the first step of the mediation analysis, rational problem solving was explaining 18% of the variance in depersonalization, R^2 = .18, β = -.42, F = 24.67, p < .001. The relationship between rational problem solving and anxious attachment, tested on the second step of the mediation analysis, was not statistically significant, R^2 = .02, β = -.13, F = 1.93, p = .168. Because of the lack of a statistically significant result on the second step, the mediation analysis could not be continued.

A mediation analysis was used to determine if anxious attachment was mediating the relationship between depersonalization and impulsivity/carelessness. The results of this analysis are presented in Table 27.

Table 27

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Depersonalization and Impulsivity/Carelessness

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Impulsivity/Carelessness	Depersonalization	.07	8.49	.26**
Step 2				
Impulsivity/Carelessness	Anxious Attachment	.13	16.87	.36**
Step 3				
Anxious Attachment	Depersonalization	.05	5.76	.22*
Step 4				
Anxious Attachment	Depersonalization	.05	5.73	.22*
Impulsivity/Carelessness		.04	5.40	.21*

Sobel's Test = 2.06, p = .019

*p < .05; **p < .01

The relationship between impulsivity/carelessness and depersonalization tested on the first step of the mediation analysis was statistically significant. Seven percent of the variance in depersonalization was accounted for by impulsivity/carelessness, R^2 = .07, β = .26, F = 8.49, p < .001. On the second step, impulsivity/carelessness was a statistically significant predictor of anxious attachment, R^2 = .13, β = .36, F = 16.87, p < .001. The relationship between anxious attachment and depersonalization was tested on the third step of the mediation analysis. The results of this analysis were statistically significant, R^2 = .05, β = .22, F = 5.76, p < .05. After holding the mediating variable, anxious attachment, constant on the fourth step of the mediation analysis, the amount of variance in depersonalization accounted for by impulsivity/carelessness decreased from .07 (Step 1) to .04 (Step 4), R^2 = .04, β = .21, F = 5.40, p < .05. Sobel's test was used to determine if the mediating variable (anxious attachment) was carrying the influence of a predictor variable (impulsivity/carelessness) to a criterion variable (depersonalization; i.e., if the indirect effect of the predictor variable on the criterion variable through the mediator variable is

statistically significant). The results of this analysis produced a test statistic of 2.06 ($p = .019$), which provided support that anxious attachment was partially mediating the relationship between impulsivity/carelessness and depersonalization.

A mediation analysis was used to determine if anxious attachment was mediating the relationship between avoidance problem solving and depersonalization. Table 28 presents results of this analysis.

Table 28

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Depersonalization and Avoidance Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Avoidance Problem Solving	Depersonalization	.09	11.88	.31**
Step 2				
Avoidance Problem Solving	Anxious Attachment	.09	10.77	.29**
Step 3				
Anxious Attachment	Depersonalization	.05	5.76	.22*
Step 4				
Anxious Attachment	Depersonalization	.05	5.76	.22*
Avoidance Problem Solving		.06	7.17	.27**
Sobel's Test = 2.06, p = .019				

*$p < .05$; **$p < .01$

Nine percent of the variance in depersonalization was explained by avoidance problem solving on the first step of the mediation analysis, $R^2 = .09$, $\beta = .31$, F = 11.88, p < .001. On the second step of the mediation analysis, avoidance problem solving was a statistically significant predictor of anxious attachment, $R^2 = .09$, $\beta = .29$, F = 10.77, p < .001. The relationship between anxious attachment and depersonalization, tested on the third step of the mediation analysis was statistically significant, $R^2 = .05$, $\beta = .22$, F = 5.76, p < .05. After holding anxious attachment

constant on the fourth step of the mediation analysis, the amount of variance in depersonalization accounted for by avoidance problem solving decreased from .09 (Step 1) to .06 (Step 4), R^2 = .06, β = .27, F = 7.17, p < .001. To determine if the mediating variable (anxious attachment) was carrying the influence of a predictor variable (avoidance problem solving) to a criterion variable (depersonalization; i.e., if the indirect effect of the predictor variable on the criterion variable through the mediator variable is statistically significant), Sobel's test was calculated. The results of this analysis produced a test statistic of 2.06 (*p* = .019), which provided support that anxious attachment was partially mediating the relationship between avoidance problem solving and depersonalization.

A mediation analysis was completed using personal accomplishment as the criterion variable, social problem solving as the predictor variable, and anxious attachment as the mediating variable. The results of this analysis are presented in Table 29.

Table 29

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Personal Accomplishment and Social Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Social Problem Solving	Personal Accomplishment	<.01	.05	-.02**

p < .05; **p* < .01

On the first step of the mediation analysis, social problem solving explained less than 1% of the variance in personal accomplishment, R^2 < .01, β = -.02, F = .05, p > .05. Because of the nonsignificant findings on the first step, the mediation analysis could not be continued.

A mediation analysis was used to determine if anxious attachment was mediating the relationship between personal accomplishment and positive problem orientation. Table 30 presents results of this analysis.

Table 30

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Personal Accomplishment and Positive Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Positive Problem Orientation	Personal Accomplishment	.18	25.26	.42**
Step 2				
Positive Problem Orientation	Anxious Attachment	.01	.64	-.07**

*$p < .05$; **$p < .01$

Eighteen percent of the variance in personal accomplishment was accounted for by positive problem orientation on the first step of the mediation analysis, $R^2 = .18$, $\beta = .42$, F = 25.26, p < .001. On the second step of the mediation analysis, 1% of the variance in anxious attachment was explained by positive problem orientation, $R^2 = .01$, $\beta = -.07$, F = .64, p > .05. Because of the nonsignificant findings on the second step, the mediation analysis could not be continued.

Negative problem orientation was used as the predictor variable in a mediation analysis, with personal accomplishment used as the criterion variable. Anxious attachment was used as the mediating variable in this analysis. Table 31 presents results of this analysis.

Table 31

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Personal Accomplishment and Negative Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Negative Problem Orientation	Personal Accomplishment	.17	24.17	-.42**
Step 2				
Negative Problem Orientation	Anxious Attachment	.15	21.01	.39**
Step 3				
Anxious Attachment	Personal Accomplishment	.01	.74	-.08ns

p < .05; **p* < .01

Seventeen percent of the variance in personal accomplishment was accounted for by negative problem orientation on the first step of the mediation analysis, R^2 = .17, β = -.42, F = 24.17, p < .001. On the second step of the mediation analysis, negative problem orientation was explaining 15% of the variance in anxious attachment, R^2 = .15, β = .39, F = 21.01, p < .001. The relationship between anxious attachment and personal accomplishment tested on the third step of the mediation analysis was not statistically significant, R^2 = .01, β = -.08, F = .74, p > .05. Because of the nonsignificant findings on the third step, the mediation analysis was not continued.

A mediation analysis was completed using rational problem solving as the predictor variable, personal accomplishment as the criterion variable, and anxious attachment as the mediator variable. Table 32 presents results of this analysis.

Table 32

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Personal Accomplishment and Rational Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Rational Problem Solving	Personal Accomplishment	.28	45.63	.53**
Step 2				
Rational Problem Solving	Anxious Attachment	.02	1.93	-.13ns

*p < .05; **p < .01

On the first step of the mediation analysis, rational problem solving was accounting for 28% of the variance in personal accomplishment, R^2 = .28, β = .53, F = 45.63, p < .001. The relationship between rational problem solving and anxious attachment, tested on the second step of the mediation analysis, was not statistically significant, R^2 = .02, β = -.13, F = 1.93, p > .05. Because of the nonsignificant findings on the second step, the mediation analysis could not be continued.

A mediation analysis was used to determine if the relationship between impulsivity/carelessness and personal accomplishment was mediated by anxious attachment. Table 33 presents results of this analysis.

Table 33

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Personal Accomplishment and Impulsivity/Carelessness

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Impulsivity/Carelessness	Personal Accomplishment	.05	5.66	-.22*
Step 2				
Impulsivity/Carelessness	Anxious Attachment	.13	16.87	.36**
Step 3				
Anxious Attachment	Personal Accomplishment	.01	.74	-.08ns

*$p < .05$; **$p < .01$

Five percent of the variance in personal accomplishment, tested on the first step of the mediation analysis, was accounted for by impulsivity/carelessness, $R^2 = .05$, $\beta = -.22$, F = 5.66, p < .05. On the second step of the mediation analysis, impulsivity carelessness was explaining 13% of the variance in anxious attachment, $R^2 = .13$, $\beta = .36$, F = 16.87, p < .001. The relationship between anxious attachment and personal accomplishment tested on the third step of the mediation analysis was not statistically significant, $R^2 = .01$, $\beta = -.08$, F = .74, p > .05. The mediation analysis could not be continued because of the nonsignificant finding on the third step.

A mediation analysis was used to determine if anxious attachment was mediating the relationship between personal accomplishment and avoidance problem solving. The results of this analysis are presented in Table 34.

Table 34

Mediation Analysis – Mediating Role of Anxious Attachment on the Relation between Personal Accomplishment and Avoidance Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Avoidance Problem Solving	Personal Accomplishment	.13	17.14	-.36**
Step 2				
Avoidance Problem Solving	Anxious Attachment	.09	10.77	.29**
Step 3				
Anxious Attachment	Personal Accomplishment	.01	.74	-.08ns

*p < .05; **p < .01

The relationship between avoidance problem solving and personal accomplishment tested on the first step of the mediation analysis was statistically significant, R^2 = .13, β = -.36, F = 17.14, p < .001. On the second step of the mediation analysis, avoidance problem solving was accounting for 9% of the variance in anxious attachment, R^2 = .09, β = .29, F = 10.77, p < .001. The relationship between anxious attachment and personal accomplishment was tested on the third step of the mediation analysis. This relationship was not statistically significant, R^2 = .01, β = -.08, F = .74, p < .001. As a result of the nonsignificant finding on the third step, the mediation analysis could not be completed.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between social problem solving and emotional exhaustion. The results of this analysis are presented in Table 35.

Table 35

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Emotional Exhaustion and Social Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Social Problem Solving	Emotional Exhaustion	.02	1.76	.16ns

*$p < .05$; **$p < .01$

Two percent of the variance in emotional exhaustion was explained by social problem solving on the first step of the mediation analysis, $R^2 = .02$, $\beta = .16$, F = 1.76, p > .05. The mediation analysis could not be continued because of the nonsignificant finding on the first step of the analysis.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between emotional exhaustion and positive problem orientation. The results of this analysis are presented in Table 36.

Table 36

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Emotional Exhaustion and Positive Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Positive Problem Orientation	Emotional Exhaustion	.05	6.58	-.23*
Step 2				
Positive Problem Orientation	Avoidant Attachment	.01	.64	-.07ns

*$p < .05$; **$p < .01$

The relationship between positive problem orientation and emotional exhaustion, tested on the first step of the mediation analysis, was statistically significant, $R^2 = .05$, $\beta = -.23$, F =

6.58, p < .05. On the second step of the mediation analysis, the relationship between positive problem orientation and avoidant attachment was not statistically significant, R^2 = .01, β = -.07, F = .64, p > .05. Based on the lack of a statistically significant outcome on the second step, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment could be used as a mediator in the relationship between emotional exhaustion and negative problem orientation. Table 37 presents results of this analysis.

Table 37

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Emotional Exhaustion and Negative Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Negative Problem Orientation	Emotional Exhaustion	.12	16.35	.35**
Step 2				
Negative Problem Orientation	Avoidant Attachment	.09	11.97	.31**
Step 3				
Avoidant Attachment	Emotional Exhaustion	<.01	<.01	<.01ns

*p < .05; **p < .01

Twelve percent of the variance in emotional exhaustion was accounted for by negative problem orientation on the first step of the mediation analysis, R^2 = .12, β = .35, F = 16.35, p < .001. On the second step of the mediation analysis, the relationship between avoidant attachment and negative problem solving was tested. The results of this analysis were statistically significant, R^2 = .09, β = .31, F = 11.97, p < .001. The relationship between avoidant attachment and emotional attachment, tested on the third step of the mediation analysis, was not statistically

significant, $R^2 < .01$, $\beta < .01$, $F < .01$, $p > .05$. Because of the nonsignificant finding on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if the relationship between emotional exhaustion and rational problem solving was mediated by avoidant attachment. Results of this analysis are presented in Table 38.

Table 38

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Emotional Exhaustion and Rational Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Rational Problem Solving	Emotional Exhaustion	.07	8.91	-.24**
Step 2				
Rational Problem Solving	Avoidant Attachment	.11	14.17	-.33**
Step 3				
Avoidant Attachment	Emotional Exhaustion	<.01	<.01	<.01ns

*$p < .05$; **$p < .01$

On the first step of the mediation analysis, 7% of the variance in emotional exhaustion was accounted for by rational problem solving, $R^2 = .07$, $\beta = -.24$, $F = 8.91$, $p < .001$. The relationship between rational problem solving and avoidant attachment, tested on the second step of the mediation analysis was statistically significant, $R^2 = .11$, $\beta = -.33$, $F = 14.17$, $p < .001$. On the third step of the mediation analysis, the relationship between avoidant attachment and emotional exhaustion was tested. The results were not statistically significant, $R^2 < 01$, $\beta < .01$, $F < .01$, $p > .05$. As a result of the nonsignificant result on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment could be used to mediate the relationship between emotional exhaustion and impulsivity/carelessness. The results of this analysis are presented in Table 39.

Table 39

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Emotional Exhaustion and Impulsivity/Carelessness

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Impulsivity/Carelessness	Emotional Exhaustion	.04	4.97	.20*
Step 2				
Impulsivity/Carelessness	Avoidant Attachment	.06	7.43	.25**
Step 3				
Avoidant Attachment	Emotional Exhaustion	<.01	<.01	<.01ns

*$p < .05$; **$p < .01$

Four percent of the variance in emotional exhaustion was accounted for by impulsivity/carelessness on the first step of the mediation analysis, $R^2 = .04$, $\beta = .20$, F = 4.97, p < .05. On the second step of the mediation analysis, 6% of the variance in avoidant attachment was explained by impulsivity/carelessness, $R^2 = .06$, $\beta = .25$, F = 7.43, p < .001. The relationship between avoidant attachment and emotional exhaustion tested on the third step of the mediation analysis was not statistically significant, $R^2 < .01$, $\beta < .01$, F < .01, p > .05. Based on the nonsignificant findings on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if the relationship between emotional exhaustion and avoidance problem solving was mediated by avoidant attachment. The results of this analysis are presented in Table 40.

Table 40

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Emotional Exhaustion and Avoidance Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Avoidance Problem Solving	Emotional Exhaustion	.08	9.27	.27**
Step 2				
Avoidance Problem Solving	Avoidant Attachment	.08	10.04	.28**
Step 3				
Avoidant Attachment	Emotional Exhaustion	<.01	<.01	<.01ns

*p < .05; **p < .01

On the first step of the mediation analysis, 8% of the variance in emotional exhaustion was explained by avoidance problem solving, R^2 = .08, β = .27, F = 9.27, p < .001. The relationship between avoidance problem solving and avoidant attachment, tested on the second step of the mediation analysis, was statistically significant, R^2 = .08, β = .28, F = 10.04, p < .001. On the third step of the mediation analysis, the relationship between avoidant attachment and emotional exhaustion was not statistically significant, R^2 < .01, β < .01, F < .01, p > .05. Because of the lack of a statistically significant relationship on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between depersonalization and social problem solving. Table 41 presents results of this analysis.

Table 41

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Depersonalization and Social Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Social Problem Solving	Depersonalization	.01	1.98	.13ns

*p < .05; **p < .01

On the first step of the mediation analysis, social problem solving was accounting for 1% of the variance in depersonalization, R^2 = .01, β = .13, F = 1.98, p > .05. Because of the nonsignificant findings on the first step, the mediation analysis could not be completed.

Depersonalization was used as the criterion variable, with positive problem orientation used as the predictor variable and avoidant attachment used as the mediating variable in a mediation analysis. Table 42 presents results of this analysis.

Table 42

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Depersonalization and Positive Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Positive Problem Orientation	Depersonalization	.07	8.49	-.26**
Step 2				
Positive Problem Orientation	Avoidant Attachment	.12	14.88	-.34**
Step 3				
Avoidant Attachment	Depersonalization	.01	1.27	.11ns

*p < .05; **p < .01

Seven percent of the variance in depersonalization was accounted for by positive problem orientation on the first step of the mediation analysis, R^2 = .07, β = -.26, F = 8.49, p <.001. On the second step of the mediation analysis, positive problem orientation was explaining 12% of the variance in

avoidant attachment, $R^2 = .12$, $\beta = -.34$, $F = 14.88$, $p < .001$. One percent of the variance in depersonalization was accounted for by avoidant attachment on the third step of the mediation analysis, $R^2 = .01$, $\beta = .11$, $F = 1.27$, $p > .05$. Because of the nonsignificant findings on the third step, the mediation analysis could not be continued.

A mediation analysis was completed using depersonalization as the criterion variable, negative problem orientation as the predictor variable, and avoidant attachment as the mediating variable. Table 43 presents results of this analysis.

Table 43

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Depersonalization and Negative Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Negative Problem Orientation	Depersonalization	.14	19.13	.38**
Step 2				
Negative Problem Orientation	Avoidant Attachment	.09	11.97	.31**
Step 3				
Avoidant Attachment	Depersonalization	.01	1.27	.11ns

*$p < .05$; **$p < .01$

On the first step of the mediation analysis, 14% of the variance in depersonalization was accounted for by negative problem orientation, $R^2 = .14$, $\beta = .38$, $F = 19.13$, $p < .001$. The relationship between negative problem orientation and avoidant attachment, tested on the second step of the mediation analysis, was not statistically significant, $R^2 = .09$, $\beta = .31$, $F = 11.97$, $p < .001$. Avoidant attachment explained 1% of the variance in depersonalization on the third step of the mediation analysis, $R^2 = .01$, $\beta = .11$, $F = 1.27$, $p > .05$. Because of the nonsignificant finding on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between depersonalization and rational problem solving. Table 44 presents results of this analysis.

Table 44

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Depersonalization and Rational Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Rational Problem Solving	Depersonalization	.18	24.67	-.42**
Step 2				
Rational Problem Solving	Avoidant Attachment	.11	14.17	-.33**
Step 3				
Avoidant Attachment	Depersonalization	.01	1.27	.11ns

p < .05; **p* < .01

Eighteen percent of the variance in depersonalization was explained by rational problem solving on the first step of the mediation analysis, R^2 = .18, β = -.42, F = 24.67, p < .001. On the second step of the mediation analysis, rational problem solving accounted for 11% of the variance in avoidant attachment, R^2 = .11, β = -.33, F = 14.17, p < .001. One percent of the variance in depersonalization was explained by avoidant attachment on the third step of the mediation analysis, R^2 = .01, β = .11, F = 1.27, p > .05. Because of the nonsignificant result on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if the relationship between impulsivity/carelessness and depersonalization was being mediated by avoidant attachment. The results of this analysis are presented in Table 45.

Table 45

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Depersonalization and Impulsivity/Carelessness

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Impulsivity/Carelessness	Depersonalization	.07	8.49	.26**
Step 2				
Impulsivity/Carelessness	Avoidant Attachment	.06	7.43	.25**
Step 3				
Avoidant Attachment	Depersonalization	.01	1.27	.11ns

*p < .05; **p < .01

On the first step of the mediation analysis, the relationship between impulsivity/carelessness and depersonalization was statistically significant, R^2 = .07, β = .26, F = 8.49, p < .001. The relationship between impulsivity/carelessness and avoidant attachment tested on the second step of the mediation analysis was statistically significant, R^2 = .06, β = .25, F = 7.43, p < .001. The third step of the mediation analysis tested the relationship between avoidant attachment and depersonalization. This relationship was not statistically significant, R^2 = .01, β = .11, F = 1.27, p > .05. Because of the nonsignificant relationship between the mediating variable and the criterion variable, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between avoidance problem solving and depersonalization. Table 46 presents results of this analysis.

Table 46

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Depersonalization and Avoidance Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Avoidance Problem Solving	Depersonalization	.09	11.88	.31**
Step 2				
Avoidance Problem Solving	Avoidant Attachment	.08	10.04	.28**
Step 3				
Avoidant Attachment	Depersonalization	.01	1.27	.11ns

*p < .05; **p < .01

Nine percent of the variance in depersonalization was accounted for by avoidance problem solving on the first step of the mediation analysis, R^2 = .09, β = .31, F = 11.88, p < .001. On the second step of the analysis, avoidance problem solving was accounting for 8% of the variance in avoidant attachment, R^2 = .08, β = .28, F = 10.04, p < .001. The relationship between avoidant attachment and depersonalization, tested on the third step of the mediation analysis, was not statistically significant, R^2 = .01, β = .11, F = 1.27, p > .05. Based on this nonsignificant finding, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between total scores for social problem solving and personal accomplishment. Table 47 presents results of this analysis.

Table 47

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Personal Accomplishment and Social Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Social Problem Solving	Personal Accomplishment	<.01	.05	-.02ns

*p < .05; **p < .01

Less than 1% of the variance in personal accomplishment was explained by social problem solving on the first step of the mediation analysis, R^2 < .01, β = -.02, F = .05, p > .05. Because of the nonsignificant outcome on the first step, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between personal accomplishment and positive problem solving. Table 48 presents results of this analysis.

Table 48

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Personal Accomplishment and Positive Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Positive Problem Orientation	Personal Accomplishment	.18	25.26	.42**
Step 2				
Positive Problem Orientation	Avoidant Attachment	.12	14.88	-.34**
Step 3				
Avoidant Attachment	Personal Accomplishment	.02	2.59	-.15ns

*p < .05; **p < .01

On the first step of the mediation analysis, 18% of the variance in personal accomplishment was accounted for by positive problem orientation, R^2 = .18, β = .42, F = 25.26, p < .001. The relationship between positive problem orientation and avoidant attachment, tested on the second step of the mediation analysis, was statistically significant, R^2 = .12, β = -.34, F = 14.88, p < .001. On the third step of the

mediation analysis, the relationship between avoidant attachment and personal accomplishment was not statistically significant, R^2 = .02, β = -.15, F = 2.59, p > .05. As a result of the nonsignificant finding on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between negative problem orientation and personal accomplishment. Table 49 presents results of this analysis.

Table 49

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Personal Accomplishment and Negative Problem Orientation

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Negative Problem Orientation	Personal Accomplishment	.17	24.17	-.42**
Step 2				
Negative Problem Orientation	Avoidant Attachment	.09	11.97	.31**
Step 3				
Avoidant Attachment	Personal Accomplishment	.02	2.59	-.15ns

*p < .05; **p < .01

Seventeen percent of the variance in personal accomplishment was accounted for by negative problem orientation on the first step of the mediation analysis, R^2 = .17, β = -.42, F = 24.17, p < .001. On the second step of the mediation analysis, 9% of the variance in avoidant attachment was explained by negative problem orientation, R^2 = .09, β = .31, F = 11.97, p < .001. The relationship between avoidant attachment and personal accomplishment, tested on the third step of the mediation analysis, was not statistically significant, R^2 = .02, β = -.15, F = 2.59, p > .05. Because of the nonsignificant findings on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if the relationship between rational problem solving and personal accomplishment was being mediated by avoidant attachment. The results of this analysis are presented in Table 50.

Table 50

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Personal Accomplishment and Rational Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1 Rational Problem Solving	Personal Accomplishment	.28	45.63	.53**
Step 2 Rational Problem Solving	Avoidant Attachment	.11	14.17	-.33**
Step 3 Avoidant Attachment	Personal Accomplishment	.02	2.59	-.15ns

*p < .05; **p < .01

On the first step of the mediation analysis, rational problem solving was accounting for 28% of the variance in personal accomplishment, R^2 = .28, β = .53, F = 45.63, p < .001. The relationship between rational problem solving and avoidant attachment tested on the second step of the mediation analysis was statistically significant, R^2 = .11, β = -.33, F = 14.17, p > .05. On the third step of the mediation analysis, the relationship between avoidant attachment and personal accomplishment was not statistically significant, R^2 = .02, β = -.15, F = 2.59, p > .05. Because of the lack of a statistically significant relationship on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if the relationship between impulsivity/carelessness and personal accomplishment was mediated by avoidant attachment. Table 51 presents results of this analysis.

Table 51

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Personal Accomplishment and Impulsivity/Carelessness

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Impulsivity/Carelessness	Personal Accomplishment	.05	5.66	-.21*
Step 2				
Impulsivity/Carelessness	Avoidant Attachment	.06	7.43	.25**
Step 3				
Avoidant Attachment	Personal Accomplishment	.02	2.59	-.15ns

*$p < .05$; **$p < .01$

On the first step of the mediation analysis, 5% of the variance in personal accomplishment was explained by impulsivity/carelessness, $R^2 = .05$, $\beta = -.21$, $F = 5.66$, $p < .05$. The relationship between impulsivity/carelessness and avoidant attachment, tested on the second step of the mediation analysis, was statistically significant, $R^2 = .06$, $\beta = .25$, $F = 7.43$, $p < .001$. On the third step of the mediation analysis, the relationship between avoidant attachment and personal accomplishment was not statistically significant, $R^2 = .02$, $\beta = -.15$, $F = 2.59$, $p > .05$. As a result of the nonsignificant finding on the third step, the mediation analysis could not be continued.

A mediation analysis was used to determine if avoidant attachment was mediating the relationship between avoidance problem solving and personal accomplishment. Table 52 presents results of this analysis.

Table 52

Mediation Analysis – Mediating Role of Avoidant Attachment on the Relation between Personal Accomplishment and Avoidance Problem Solving

Predictor	Criterion	R^2	F	Standardized β
Step 1				
Avoidance Problem Solving	Personal Accomplishment	.13	17.14	-.36**
Step 2				
Avoidance Problem Solving	Avoidant Attachment	.08	10.04	.28**
Step 3				
Avoidant Attachment	Personal Accomplishment	.02	2.59	-.15ns

p < .05; **p* < .01

The relationship between avoidance problem solving and personal accomplishment, tested on the first step of the mediation analysis was statistically significant, R^2 = .13, β = -.36, F = 17.14, p < .001. On the second step of the mediation analysis, the relationship between avoidant problem solving and avoidant attachment was statistically significant, R^2 = .08, β =.28, F = 10.04, p < .001. The relationship between avoidant attachment and personal accomplishment tested on the third step of the mediation analysis was not statistically significant, R^2 = .02, β = -.15, F = 2.59, p > .05. The mediation analysis could not be continued because of the nonsignificant finding on the third step.

Of the 36 mediation analyses that were used to address this research question, 3 provided evidence of partial mediation. If the amount of variance in the criterion variable that is explained by the predictor variable is reduced, but the relationship between the criterion and predictor variables remain statistically significant after completing Baron and Kenny's four-step process to determine mediation, a Sobel's test is performed to determine if a partial mediation is present. A partial mediation suggests that other variables that are not accounted for in the analysis are contributing to the relationship between the predictor and criterion variables. Because these variables are not included in the study, it is not possible to determine the source of the variance. Table 53 presents a summary of the mediation analyses that were

used to test the mediating effects of anxious and avoidant attachment on the relationships between the subscales measuring burnout and social problem solving.

Table 53

Summary of Mediation Analyses

Criterion Variable	Predictor Variable	Mediating Variable	Results
Emotional Exhaustion	Social Problem Solving	Anxiety	No mediation
	Positive problem orientation		No mediation
	Negative problem orientation		No mediation
	Rational problem solving style		No mediation
	Impulsivity/Carelessness style		No mediation
	Avoidance Style		No mediation
Depersonalization	Social Problem Solving	Anxiety	No mediation
	Positive problem orientation		No mediation
	Negative problem orientation		**Partial mediation**
	Rational problem solving style		No mediation
	Impulsivity/Carelessness style		**Partial mediation**
	Avoidance Style		**Partial mediation**
Personal Accomplishment	Social Problem Solving	Anxiety	No mediation
	Positive problem orientation		No mediation
	Negative problem orientation		No mediation
	Rational problem solving style		No mediation
	Impulsivity/Carelessness style		No mediation
	Avoidance Style		No mediation
Emotional Exhaustion	Social Problem Solving	Avoidance	No mediation
	Positive problem orientation		No mediation
	Negative problem orientation		No mediation
	Rational problem solving style		No mediation
	Impulsivity/Carelessness style		No mediation
	Avoidance Style		No mediation
Depersonalization	Social Problem Solving	Avoidance	No mediation
	Positive problem orientation		No mediation
	Negative problem orientation		No mediation
	Rational problem solving style		No mediation
	Impulsivity/Carelessness style		No mediation
	Avoidance Style		No mediation
Personal Accomplishment	Social Problem Solving	Avoidance	No mediation
	Positive problem orientation		No mediation
	Negative problem orientation		No mediation
	Rational problem solving style		No mediation
	Impulsivity/Carelessness style		No mediation
	Avoidance Style		No mediation

Research Question 3. Can burnout be predicted from personal characteristics of the direct care staff (age, gender, marital status, educational level, presently working toward higher education) and professional characteristics (hours worked per week, length of time working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population)?

H_3: Burnout can be predicted from personal characteristics of the direct care staff (age, gender, marital status, educational level, presently working toward higher education) and professional characteristics (hours worked per week, length of time working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population).

H_{03}: Burnout cannot be predicted from personal characteristics of the direct care staff (age, gender, marital status, educational level, presently working toward higher education) and professional characteristics (hours worked per week, length of time working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population).

Stepwise multiple linear regression analysis was used to test the hypothesis that burnout could be predicted from personal characteristics of the direct care staff. The categorical variables (gender, marital status, educational level, presently working toward higher education, and participation in training for working with adults with mental illness) were dummy coded to allow their use in the analysis. Prior to completing the stepwise multiple linear regression analysis, an intercorrelation matrix was used to determine which of the predictor variables could be used to predict burnout as measured by emotional exhaustion, depersonalization, and personal accomplishment. Only those predictor variables that were significantly related to the criterion variables were included in the stepwise multiple linear regression analysis. Table 54 presents the results of the intercorrelation matrix.

Table 54

Pearson Product Moment Correlations: Burnout and Personal and Professional Characteristics

Predictor Variables	Emotional Exhaustion			Depersonalization			Personal Accomplishment		
	n	*r*	*p*	*n*	*r*	*p*	*n*	*r*	*p*
Age of participant	116	-.06	.499	116	-.06	.530	116	.08	.375
Gender	115	<.01	.997	115	-.08	.426	115	-.05	.578
Ethnicity	117	.06	.531	117	-.11	.243	117	.11	.234
Marital Status	117	-.09	.337	117	.01	.879	117	-.08	.366
High school graduate/GED	**117**	**-.20**	**.032**	117	-.17	.074	117	-.02	.865
Some college	117	.15	.115	117	.06	.519	117	-.06	.522
College degree	117	.04	.657	117	.10	.277	117	.08	.392
Work more than 40 hours	117	-.05	.630	117	-.05	.607	117	.06	.549
Work between 30 and 40 hours	117	-.04	.693	117	-.07	.451	117	.08	.368
Work less than 30 hours	117	.17	.065	117	.17	.071	117	-.14	.146
Work at present home more than 40 hours	117	.05	.619	117	-.08	.392	117	.13	.149
Work at present home between 30 to 40 hours	117	-.06	.550	117	-.03	.786	117	.03	.737
Work at present home less than 30 hours	117	.08	.409	117	.12	.198	117	-.16	.085
Number of children	107	-.03	.741	107	-.04	.702	107	-.07	.488
Working towards higher education	109	.09	.369	109	.15	.113	109	-.06	.562
Presently in romantic relationship	98	-.13	.216	98	-.05	.645	98	-.11	.282
Time worked in mental health field	117	-.15	.100	117	-.15	.105	**117**	**.22**	**.018**
Time worked in group homes	117	-.14	.133	117	-.16	.090	117	.17	.075
Time worked in present home	117	.05	.613	117	-.05	.566	117	.12	.188
Only job	117	.04	.657	117	.07	.468	117	-.02	.838

One variable, high school graduate/GED was significantly correlated with emotional exhaustion (r = -.20, p = .032). The negative relationship indicated that participants who had obtained either a high

school diploma or a GED were less likely to experience emotional exhaustion. None of the predictor variables was significantly correlated with depersonalization. Time worked in mental health field was significantly correlated with personal accomplishment ($r = .22$, $p = .018$). With only one variable significantly related to emotional exhaustion and personal accomplishment, the planned stepwise multiple linear regression analyses were not completed.

Ancillary Findings

The mean scores for avoidance and anxiety as measures of adult attachment were dichotomized to determine the number of participants in the four quadrants of adult attachment: preoccupied, fearful avoidant, secure attachment, and dismissing attachment. Figure 1 presents the scatterplot with the midpoints for each scale.
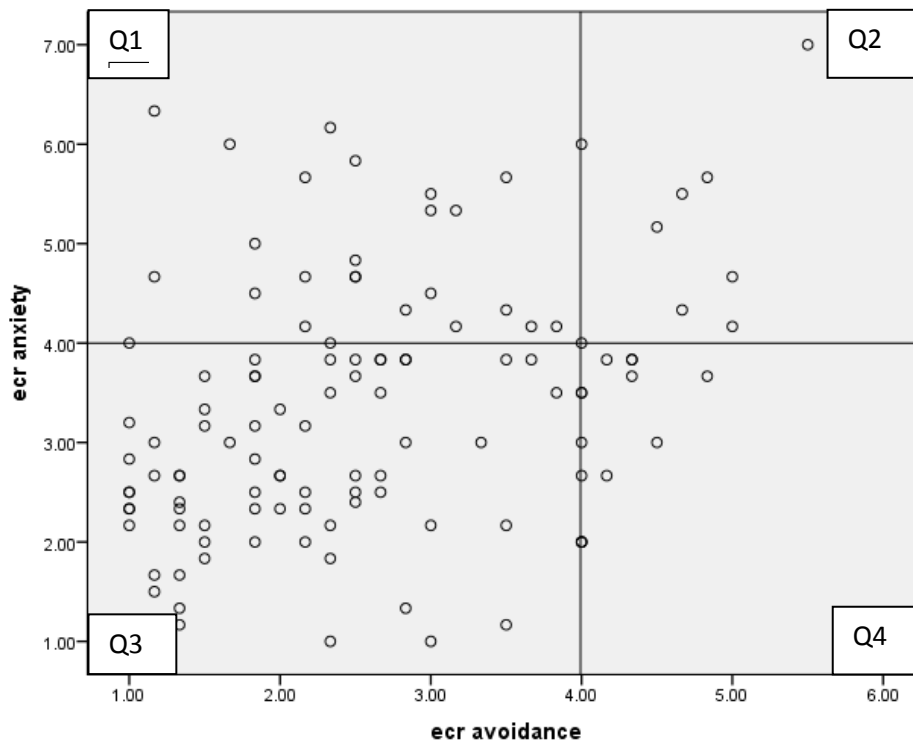

Figure 1: Scatterplot of Attachment Styles

Quadrants   Q1 Low Avoidance and High Anxiety – Preoccupied

                        Q2 High Avoidance and High Anxiety – Fearful Avoidant

                        Q3 Low Avoidance and Low Anxiety – Secure Attachment

                        Q4 High Avoidance and Low Anxiety – Dismissing Avoidant

Table 55

Crosstabulation of Attachment Styles

| | Avoidance | | | | | |
| | Low | | High | | Total | |
Anxiety	n	%	n	%	n	%
Low	69	73.4	14	60.9	83	70.9
High	25	26.6	9	39.1	34	29.1
Total	94	100.0	23	100.0	117	100.0

Participants with low anxiety and low avoidance (n = 69, 73.4%) were considered to have secure attachment. Fourteen (60.9%) of the participants had low anxiety and high avoidance. These participants were considered to have a dismissing attachment style. A preoccupied attachment style was found for 25 (26.6%) of the participants who had high anxiety and low avoidance. Nine (39.1%) of the participants had a fearful attachment style, which was high anxiety and high avoidance.

Summary

The results of the data analysis used to describe the sample and address the research questions have been presented in this chapter. A discussion of the findings and recommendations can be found in Chapter 5.

CHAPTER V

DISCUSSION

The purpose of this study was to examine the nature of the indirect effects that the direct care worker's attachment systems and problem solving abilities have on their burnout status. A sample of 117 direct care workers employed at group homes in a Mid-Western State participated in this study by completing four surveys: the Social Problem Solving Inventory – Revised Short Form (SPSI-R:S) developed by D'Zurilla et al. (2002); the Maslach Burnout Inventory-Human Services Survey (MBI-HS) developed by Maslach et al. (1996), the Experiences in Close Relations – Short Form (ECR-SF) developed by Wei et al. (2007); and, a short demographic survey developed by the researcher. First, an outline of the research findings, as they applied to the tested hypotheses is presented.

The participants ranged in age from 19 to 70, with a mean age of 33.49 (sd = 12.18) years. The majority of the participants were female and Caucasian. Most of the direct care workers were not married, had no children, and were in a romantic relationship. While all participants had at least a high school education, most had some college or technical school as their highest level of education. Their experiences in mental health ranged from 1 to 40 years and they were working full time in their positions.

Separate stepwise multiple linear regression analyses were used to determine if burnout could be predicted from anxious and avoidant attachment and problem solving ability among staff who were working with chronically mentally ill clients in a group home setting. Relationships were examined at the subscale level, rather than at the total score level, to glean additional information that could not be obtained by examining the total scores of the

instruments on their own (Baker, 2003; D'Zurilla & Nezu, 1990; Grau-Alberola et al., 2010). The hypothesis was stated as follows:

H_{1a}: Emotional exhaustion can be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

H_{01a}: Emotional exhaustion cannot be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

H_{1b}: Depersonalization can be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

H_{01b}: Depersonalization cannot be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

H_{1c}: Personal accomplishment can be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

H_{01c}: Personal accomplishment cannot be predicted from Anxious and Avoidant attachment and problem solving ability among staff who are working with chronically mentally ill clients in a group home setting.

Negative problem orientation accounted for 12% of the variance in emotional exhaustion. The positive relationship between negative problem orientation and emotional exhaustion, was in the expected direction, suggesting that when direct care staff (a) tended to view their problems as

significant threats to their wellbeing, (b) doubted their abilities to successfully solve their problems, and (c) tended to become easily frustrated when they encountered problems which they interpreted as roadblocks to achieving their goals (D'Zurilla et al., 2004), they may be more likely to feel drained and used up, with no source of replenishment, in the workplace (Maslach et al., 1996). This finding was expected as negative problem solving orientation is indicative of the lack of a motivational component that energizes an individual's problem solving efficacy (Belzer, D'Zurilla, & Maydeu-Olivares, 2002; D'Zurilla et al., 2004). A lack of motivation and problem solving efficacy when faced with responsibility in a stressful work environment intuitively relates to emotional exhaustion and supports the established research (Maslach, 2003a, 2003b). Other variables that were not included in the analyses were accounting for the 88% of the unexplained variance in emotional exhaustion. These variables might have been situational in nature (e.g., rate of pay, perceived supervisor support, shift work, family problems, tension among employees, etc.). These variables could be used in future research on burnout to determine their contribution to emotional exhaustion in direct care employees.

Rational problem solving style explained 18% of the variance in depersonalization, and negative problem orientation accounted for an additional 6% of the variance in depersonalization. The negative relationship between rational problem solving style and depersonalization was in the expected direction, indicating that direct care workers who were likely to use proactive and deliberate and effective problem solving skills systematically (D'Zurilla et al., 2004) also were less likely to experience detachment from their job and/or callous feelings towards their clients, coworkers, and their employer (Halbesleben & Buckley, 2004). The positive relationship between negative problem orientation and depersonalization also was in the expected direction, providing evidence that when direct care workers interpreted

their problems as significant threats to their wellbeing, doubted their problem solving efficacy, and became easily frustrated when their goals were blocked, they were also more likely to experience a detachment from their job and/or callous feelings towards their clients, coworkers, or employer.

Rational problem solving style accounted for 29% of the variance in personal accomplishment, while negative problem orientation explained an additional 6% of the variance in personal accomplishment. An expected positive relationship was found between rational problem solving style and personal accomplishment. The relationship makes sense, suggesting that as direct care workers employ rational and deliberate problem solving practices (effective problem solving skills), they were more likely to experience a protective function with respect to burnout. According to Maslach et al. (1996), personal accomplishment refers to a feeling of competence, accomplishment, and success in one's work with people. Anderson (2000) also found that problem focused coping at work led to fewer feelings of depersonalization and more feelings of personal accomplishment in a sample of 121 veteran Children's Protective Services workers.

Negative problem orientation was expectedly related with personal accomplishment in a negative direction. This finding suggested that when direct care workers tended to lack motivation and perceived problem solving efficacy, they also found themselves feeling a reduced sense of personal accomplishment.

Anxious and avoidant attachment did not enter the three multiple linear regression analyses, indicating they were not significantly related to emotional exhaustion, depersonalization, and personal accomplishment. This lack of relationships among these variables was unexpected as previous research has indicated that insecure attachment was

associated with burnout. Secure attachment was not included as a predictor variable in these analyses. Perhaps additional research using secure rather than insecure attachment should be used as a predictor of burnout.

The second hypothesis examined if attachment (anxiety and avoidance) mediated the relationship between problem solving ability and burnout status in direct care workers who were employed at group homes for severely mentally ill adults in a Mid-Western state. The hypothesis was stated as follows:

H_2: Adult attachment, as measured by anxiety and avoidance, mediates the relationship between problem solving ability and burnout among staff who are working with chronically mentally ill clients in a group home setting.

H_{02}: Adult attachment, as measured by anxiety and avoidance, does not mediate the relationship between problem solving ability and burnout among staff who are working with chronically mentally ill clients in a group home setting.

Anxious attachment was found to be partially mediating the relationship between negative problem orientation and depersonalization. Anxious attachment was partially mediating the relationship between impulsivity/carelessness style and depersonalization. Anxious attachment also partially mediated the relationship between avoidance problem solving style and depersonalization. Based on the Baron and Kenny (2012) mediation model, the amount of explained variance decreased from the first step to the fourth step of the mediation analysis. However, the relationship between the criterion variable and the predictor variable remained statistically significant after holding the mediating variable constant. The statistically significant results on the Sobel test provided support that a partial mediation was occurring, indicating that one or more variables that were not included in the analysis were also accounting for some of the

variance between the predictor and criterion variables. These variables could have been situational (pay, work hours, supervisor support, responsibilities, etc.) that were not included in the present study (Jenaro, Flores, & Arias, 2007).

Avoidance attachment was not mediating the relationships between problem solving and burnout status. Direct care workers who use avoidance attachment generally do not use effective problem-solving skills to cope with difficult situations in their jobs. Instead, they avoid situations that require problem solving that could lead to burnout.

The relationship between problem solving ability and burnout status seems to be partially mediated by anxious attachment, an integral part of the individual's personality, although the relationship was weak. Negative problem orientation, impulsivity/careless problem solving style, and avoidance problem solving are referred to by D'Zurilla, Chang, Nottingham, and Faccini (1998) as inferior problem solving styles. Inferior problem solving ability is itself related to burnout; however, Joplin et al. (1999) illustrated that the attachment system can become activated any time an individual encounters a stressful situation. It is likely that in the case of the direct care workers involved in this study, their inferior attempts at problem solving could result in the activation of their attachment systems and ultimately increase their sense of depersonalization or lack of personal accomplishment.

Malach Pines (2004), through her summary of the current research, demonstrated that insecurely attached individuals were more likely to experience maladjustment resulting from poor coping skills and problem solving ability. According to Mikulincer and Shaver (2003), insecure attachment styles (anxious and avoidant) are related to inadequate attempts at problem solving and coping in general. Malach Pines (2004) also demonstrated that attachment styles shape the coping responses of adults by way of the appraisals they make about themselves and

others in times of adversity. The attachment system, and the internal working model of self and others (Bartholomew, 1990) becomes activated in times of distress (Ein-Dor et al., 2010; Mikulincer & Florian, 1995; Mikulincer et al., 1993; Mikulincer et al., 1999; Mikulincer & Shaver, 2003; P. Shaver & M. Mikulincer, 2002). With respect to the direct care workers involved in this study, their insecure anxious attachment may have biased their problem solving efficacy, by way of their negative internal working models, leading them to lack the necessary motivation (negative problem orientation) to use productive problem solving strategies. Instead, anxiously attached direct care staff in this study, given their lack of motivation and problem solving efficacy, were more likely to use ineffective, or careless, coping styles (impulsivity/careless, and avoidance) that resulted in a sense of detachment from work, and callous feelings towards group home residents, their colleagues, and their employer (depersonalization). Negative problem orientation, specifically, has been found to negatively influence emotional regulation and rational problem solving ability (Eliot & Marmarosh, 1994). The findings were consistent with established research (Mikulincer & Shaver, 2003), indicating that insecurely attached individuals are more likely to attribute stressful situations as threatening, inescapable, and uncontrollable. Anxiously attached individuals, in particular, tend to focus energy on attenuating negative feelings and perseveration, rather than focusing on solving the problem at hand. Impulsive/carelessness, as well as avoidance problem solving styles, can be seen as inefficient attempts at relieving hypervigilence to affect (Harms, 2010, 2011; Hazan & Shaver, 1990; Malach Pines, 2004; Mikulincer & Florian, 1995; Mikulincer et al., 1993), rather than deliberate, rational attempts to solve a problem that is causing distress. Harms (2010); Hazan and Shaver (1990); and Mikulincer and Shaver (2005) found that anxious attachment is related to burnout in the workplace, while Ronen and Mikulincer (2009), in their examination of

393 employees at area businesses in Israel, found that individuals with insecure attachments were more likely to appraise contextual variables negatively by drawing upon their negative internal working models. According to Ronen and Mikulincer (2009), insecurely attached individuals were more likely to experience burnout as a result of their negative appraisals.

The lack of statistically significant relationships between the three scales measuring burnout and anxious and avoidant attachment was unexpected. Previous research (Malach Pines, 2004; Ronen & Mikulincer, 2009) has found that insecure attachment, specifically anxious attachment, tended to be associated with burnout and poor problem solving. The direct care workers in the present study may not be experiencing burnout to the same extent that the participants in previous studies were. Another explanation for this lack of results may be the concerns of the direct care workers that their supervisors would become aware of their levels of burnout and face repercussions based on their responses.

The third hypothesis examined whether or not burnout could be predicted from personal and professional characteristics of the direct care staff. The hypothesis was stated as follows:

H_3: Burnout can be predicted from personal characteristics of the direct care staff (age, gender, marital status, educational level, presently working toward higher education) and professional characteristics (hours worked per week, length of time working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population).

H_{03}: Burnout cannot be predicted from personal characteristics of the direct care staff (age, gender, marital status, educational level, presently working toward higher education) and professional characteristics (hours worked per week, length of time

working with chronically ill mental health patients, length of time in present group home, participation in training for working with this population).

The variable high school diploma/GED was significantly correlated with emotional exhaustion (r = -.20, p = .032), indicating that individuals who identified themselves as having obtained either a high school diploma or GED were less likely to experience emotional exhaustion at work. It is possible that these direct care staff were satisfied with the quality of their job, as it compared to their level of education. Time worked in mental health field was significantly correlated with personal accomplishment (r = .22, p = .018), indicating that those direct care workers who had been working in the field longer felt a greater sense of accomplishment at work. These staff may have felt that they had made a difference in their years of serving the mentally ill.

Implications for Psychologists

The results of the study indicate that anxious attachment plays a role in the experience of depersonalization, a subcomponent of burnout, among direct care staff employed in group homes that support adults living with chronic mental illnesses. Psychologists working to improve client outcomes in adult group homes should look at the problem solving orientations and styles of their direct care workers. Many (Eskin et al., 2012; Mynors-Wallis et al., 2000) have found that social problem solving training improved outcomes in a population of depressed clients, and distress in a group of nurses working in a hospital. Although attachments have been found to change in some instances, attachment is a relatively stable construct (Zayas et al., 2011), the methods for change are unclear, and thus attachment is not an ideal point of intervention. Instead, attachment could be viewed by psychologists, working in group homes for the mentally ill, as a way to identify the direct care staff who are most at risk for developing burnout as a result of

poor problem solving. According to the results of this study, attachment seems to impinge on problem solving, which in turn, is associated with burnout status. The results of this study indicated that individuals with anxious attachments and poor problem solving ability were more likely to experience depersonalization, a dimension of burnout resulting in detachment from work, and callous feelings towards clients, other staff, and the organization (Maslach et al., 1996). If a psychologist working with direct care staff choses to measure attachment, it would be the individuals who have anxious attachments who should most be targeted for social problem solving skills interventions; albeit , measuring problem solving efficacy alone should be sufficient for identifying those individuals in greatest need of support. Any problem solving intervention should be geared towards helping the direct care staff to foster a more positive problem solving orientation, and rational problem solving skills. As shown in this research study, rational, deliberate, and effective problem solving skills (D'Zurilla et al., 2004) was negatively associated with emotional exhaustion, and positively associated with personal accomplishment. Both are considered resilience factors against burnout in the literature (Maslach, 2003a).

Limitations and Directions for Future Research

This study revealed that burnout was not affecting many of the group home consortium staff, as previously hypothesized. The sample size was a limitation of the study. Although every possible attempt was made to obtain as many participants as possible, some direct care workers were apprehensive about participating. The study also was limited to a single county in a Midwestern state. Further research on this topic could include a sample drawn from a broader population of direct care workers, possibly from across the state.

A second limitation was that only direct care workers in residential homes for individuals who were severely mentally ill were included in this research. Additional research could

replicate the study using direct care workers in other types of residential group homes: individuals with physical, developmental, and mental disabilities; traumatic brain injuries; and other populations viewed in the research as being in high stress situations, such as medical students, nurses, and teachers, etc.

Another possible limitation of this study may be that the direct care staff were concerned about the confidentiality of their responses and were unwilling to document their true feelings on any of the questionnaires used to collect data. Using a computer survey (e.g., SurveyMonkey) could provide anonymity for the direct care workers and encourage them to provide accurate responses in future research.

The model used for attachment in the present study may not have been adequate because it measured only insecure attachment in the form of avoidant and anxious attachment. Other models of attachment are available, such as the attachment model of Bartholomew and Horowitz (1991) which includes a secure dimension in addition to avoidant and anxious dimensions. Further research using a model that includes a secure dimension could provide different results on the relationships between problem-solving, burnout, and attachment.

Although past research has shown a relationship between attachment and burnout, this relationship appears to be weak. More variance in burnout could be explained if situational determinants of burnout are examined in addition to dispositional variables. Further research should consider including the situational variables to extend research on burnout in direct care workers.

Both attachment style and problem solving ability have been implicated in the burnout research (Maslach, 2003a, 2003b). Attachment has also been implicated in problem solving (Mikulincer et al., 1993; Mikulincer & Shaver, 2005). At this time, it is unclear whether insecure

attachment fostered poor coping skills, or if poor coping ability played a role in the individual becoming insecurely attached in the first place. First steps towards developing burnout models could be taken by future researchers by comparing attachment style, problem solving ability, and burnout in younger children in schools, and following these individuals into adulthood.

Much of the current literature has found that attachment affects coping and problem solving via the appraisals made by individuals who are faced with adversity. Further research using one additional instrument to measure cognitive appraisals and more than one instrument to measure attachment by direct care workers could provide evidence of the effect that these appraisals and attachments have on coping and problem solving abilities.

Client/patient outcomes were not examined in this study. Future research could attempt to examine client/patient outcomes before and after implementing a specific problem solving intervention in the home.

Conclusion

This study examined the effect of dispositional characteristics on the burnout status of direct care staff working in group homes for adult mentally ill clients in a Mid-Western state. The dearth of information pertaining to direct care staff in these institutions, as well as the generalizability of the available research in this area, was addressed in this study. To address criticism in the literature, the interactions between the subcomponents of problem solving, burnout, and attachment were examined, rather than examining total scores. The research was framed in the context of contemporary psychodynamic attachment theory, and considered malleable dispositional characteristics that may be easily targeted for change. In this study, anxious attachment played a role in in the direct care staff's experience of burnout via their problem solving orientations and attachment styles.
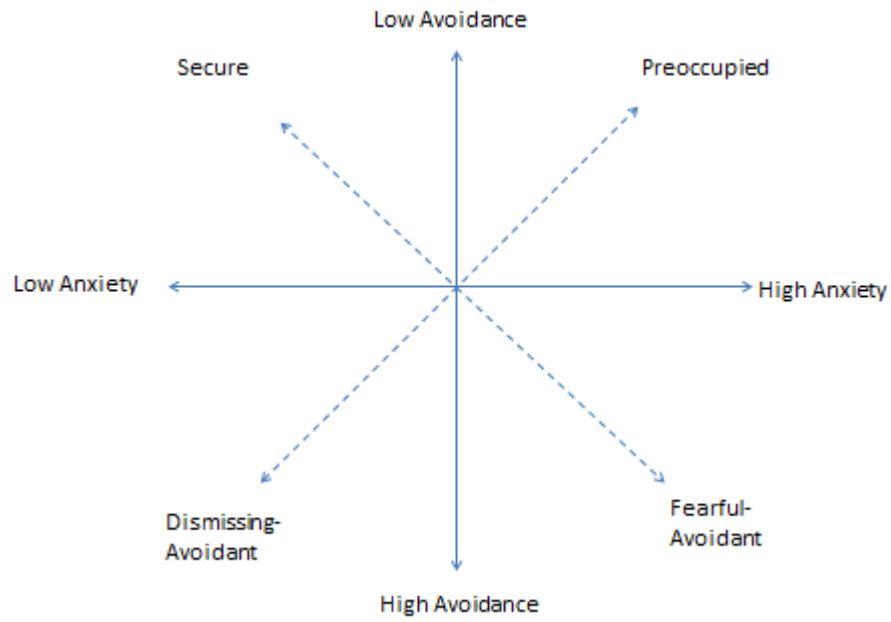
APPENDIX A

Figures

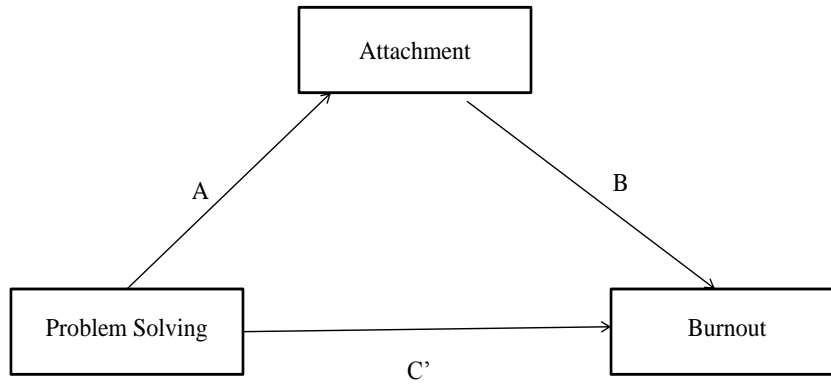*Figure 1* – Bartholomew and Horowitz (1991) Four-Category Model of Adult Attachment

Figure 2: Mediation Model for Attachment acting as a mediator between
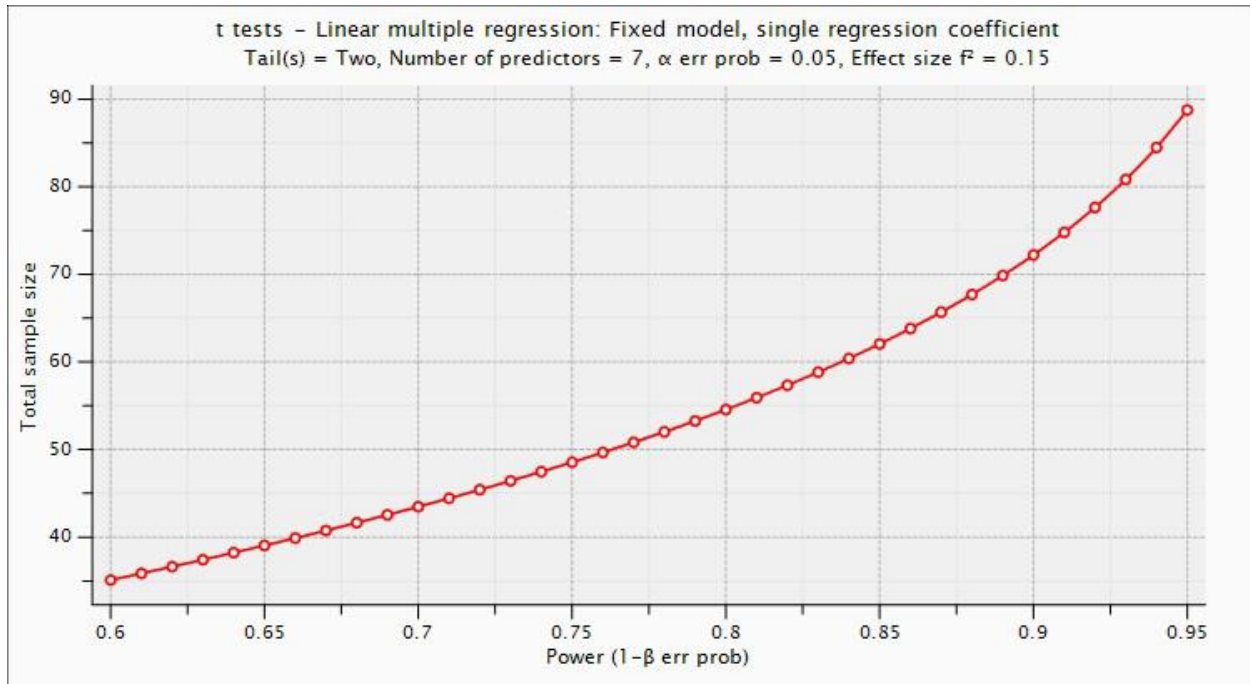Problem Solving and Burnout

Figure 3: Power Analysis

APPENDIX B

Instruments

MBI – Human Services Survey (SAMPLE ITEMS)

How Often:

0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

Place a check mark in the column that matches how often each of the following occur:

	0	1	2	3	4	5	6
1. I feel emotionally drained from my work.	☐	☐	☐	☐	☐	☐	☐
2. I feel used up at the end of the workday.	☐	☐	☐	☐	☐	☐	☐
3. I feel fatigued when I get up in the morning and have to face another day on the job.	☐	☐	☐	☐	☐	☐	☐
4. I can easily understand how my recipients feel about things.	☐	☐	☐	☐	☐	☐	☐

Experiences in Close Relationship Scale – Short Form (ECR-S)

Instructions: The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. If you are not currently in a relationship, think about your most recent relationship. If you have never been in a romantic relationship, think about a close friend, or family member. Respond to each statement by indicating how much you agree or disagree with it.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree

Place a check mark in the column that most closely matches your agreement with each of the following statements.

	1	2	3	4	5	6	7
1. It helps to turn to my romantic partner in times of need.	☐	☐	☐	☐	☐	☐	☐
2. I need a lot of reassurance that I am loved by my partner.	☐	☐	☐	☐	☐	☐	☐
3. I want to get close to my partner, but I keep pulling back.	☐	☐	☐	☐	☐	☐	☐
4. I find that my partner(s) don't want to get as close as I would like.	☐	☐	☐	☐	☐	☐	☐
5. I turn to my partner for many things, including comfort and reassurance.	☐	☐	☐	☐	☐	☐	☐
6. My desire to be very close sometimes scares people away.	☐	☐	☐	☐	☐	☐	☐
7. I try to avoid getting too close to my partner.	☐	☐	☐	☐	☐	☐	☐
8. I do not often worry about being abandoned.	☐	☐	☐	☐	☐	☐	☐
9. I usually discuss my problems and concerns with my partner.	☐	☐	☐	☐	☐	☐	☐
10. I get frustrated if romantic partners are not available when I need them.	☐	☐	☐	☐	☐	☐	☐
11. I am nervous when partners get too close to me.	☐	☐	☐	☐	☐	☐	☐
12. I worry that romantic partners won't care for me as much as I care for them.	☐	☐	☐	☐	☐	☐	☐

SPSI-R SF (SAMPLE ITEMS)

Below are some ways that you might think, feel, and act when faced with **PROBLEMS** in everyday living. We are **not** talking about the common hassles and pressures that you handle successfully every day. In this questionnaire, a **problem** is something important in your life that bothers you a lot but you don't immediately know how to make it better or stop it from bothering you so much. The problem could be something about yourself with other people (such as your family, friends, teachers, or boss), or your environment and the things that you own (such as your house, car, property, money).

Please read each statement carefully and make a check mark in the column that best shows how much the statement is true of you. See yourself as you **usually** think, feel, and act when you are faced with important problems in your life **these** days.

0	1	2	3	4
Not at all true of me	Slightly true of me	Moderately true of me	Very true of me	Extremely true of me

Place a check mark that most closely matches how you see yourself usually when faced with important problems in your life	0	1	2	3	4
1. I feel threatened and afraid when I have an important problem to solve.	☐	☐	☐	☐	☐
2. When making decisions, I do **not** evaluate all my options carefully enough.	☐	☐	☐	☐	☐
3. I feel nervous and unsure of myself when I have an important decision to make.	☐	☐	☐	☐	☐
4. When my first efforts to solve a problem fail, I know if I persist and do not give up too easily, I will be able to eventually find a good solution	☐	☐	☐	☐	☐

Demographic Survey

Please answer the following questions as they apply to you. There are no right or wrong answers. All information provided on this survey will be confidential and no individual will be identifiable in the final report.

Age
_____

Gender
☐ Male
☐ Female

Ethnicity
☐ African American
☐ Asian/Pacific Islander
☐ Caucasian/White
☐ Hispanic
☐ Middle Eastern/Arabic
☐ Multi-ethnic
☐ Native American/Alaskan Native
☐ Other_____

Marital Status
☐ Married
☐ Single
☐ Divorced
☐ Other_____

Number of Children _____

Highest level of completed education
☐ Less than high school
☐ High school graduate
☐ GED
☐ Some college/Technical school
☐ Associate's Degree
☐ Bachelor's Degree
☐ Graduate Degree

Position
☐ Direct care staff
☐ Group home supervisor
☐ Group home manager
☐ Other _____

Are you presently working towards a degree in higher education?   ☐ Yes   ☐ No

Are you presently involved in a romantic relationship?   ☐ Yes   ☐ No

How long have you worked in mental health field?   _____ years

How long have you worked in group homes for the mentally ill?   _____ years

How long have you worked in this home?   _____ years

Have you completed training programs for working with the mentally ill?   ☐ Yes   ☐ No

Is this your only job?   ☐ Yes   ☐ No

How many hours per week do you work in total?

☐ More than 40 hours   ☐ Between 30 and 40 hours   ☐ Between 20 and 30 hours
☐ Between 10 and 20 hours   ☐ Less than 10 hours

How many hours per week do you work at this home?

☐ More than 40 hours   ☐ Between 30 and 40 hours   ☐ Between 20 and 30 hours
☐ Between 10 and 20 hours ☐ Less than 10 hours

APPENDIX C

Information Research Sheet

Research Information Sheet
Title of Study: Dispositional Mediators of Burnout Syndrome in a Sample of Direct Care Staff
Employed at Group Homes in a Mid-Western State

Principal Investigator (PI):   Chris Carreira
                                   Educational Psychology
                                   586-203-8384

Purpose:
You are being asked to participate in a short study about the factors in a person's life that may
influence whether or not they experience burnout (feeling exhausted from work) in their work
place. You are being asked to participate because you work in a setting that can be very stressful
at times. A doctoral student from Wayne State University is conducting this study.

Study Procedures:
If you participate in this study, you will be asked to complete four short surveys that will ask
about you, your problem solving ability, how you feel in your romantic relationships, and about
burnout. Once completed, place the surveys in the provided envelope and draw some X's on the
seal. Return the envelope to Chris Carreira, or place it in the drop box that was left at your group
home. It should take about 30 minutes to complete all the surveys.

Benefits
As a participant in this research study, there will be no direct benefit for you; however,
information from this study may benefit other people now or in the future.

Risks
By taking part in this study, you may experience slight discomfort when answering some of the
survey questions. You do not have to answer any question that makes you feel uncomfortable.

Costs
There will be no costs to you for participation in this research study.

Compensation
You will not be paid for taking part in this study.

Confidentiality

All information collected about you during the course of this study will be kept without any identifiers.

Voluntary Participation /Withdrawal:

Your participation is voluntary. You are free to skip any question or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or your place of work.

Questions:

If you have any questions about this study now or in the future, you may contact Chris Carreira at the following phone number: 586-203-8384. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation:

By completing the questionnaires, you are agreeing to participate in this study.

APPENDIX D

Approval from Wayne State University Internal Review Board

WAYNE STATE UNIVERSITY

IRB Administration Office
87 East Canfield, Second Floor
Detroit, Michigan 48201
Phone: (313) 577-1628
FAX: (313) 993-7122
http://irb.wayne.edu

CONCURRENCE OF EXEMPTION

To: Cristovao Carreira
Deans Office Education
P.O. Box 98

From: Dr. Scott Millis
Chairperson, Behavioral Institutional Review Board (B3)

Date: December 14, 2012

RE: IRB #: 117112B3X

Protocol Title: Dispositional Mediators of Burnout Syndrome in a Sample of Direct Care Staff Employed at Group Homes in a Mid-Western State

Sponsor:

Protocol #: 1211011489

The above-referenced protocol has been reviewed and found to qualify for **Exemption** according to paragraph #2 of the Department of Health and Human Services Code of Federal Regulations [45 CFR 46.101(b)].

- Protocol Summary Form (received in the IRB Office 11/21/12)
- Protocol (received in the IRB Office 11/21/12)
- The request for a waiver of the requirement for written documentation of informed consent has been granted according to 45 CFR 46.117(1)(2). Justification for this request has been provided by the PI in the Protocol Summary Form. The waiver satisfies the following criteria: (i) The only record linking the participant and the research would be the consent document, (ii) the principal risk would be potential harm resulting from a breach of confidentiality, (iii) each participant will be asked whether he or she wants documentation linking the participant with the research, and the participant's wishes will govern, (iv) the consent process is appropriate, (v) when used requested by the participants consent documentation will be appropriate, (vi) the research is not subject to FDA regulations, and (vii) an information sheet disclosing the required and appropriate additional elements of consent disclosure will be provided to participants not requesting documentation of consent.
- Research Information Sheet (dated 11/21/12)
- Data collection tools: Demographic Survey, Experiences in Close Relationship Scale - Short Form (ECR-S), MBI - Human Services Survey, and SPSI-R:S

This proposal has not been evaluated for scientific merit, except to weigh the risk to the human subjects in relation to the potential benefits.

- Exempt protocols do not require annual review by the IRB.
- All changes or amendments to the above-referenced protocol require review and approval by the IRB **BEFORE** implementation.
- Adverse Reactions/Unexpected Events (AR/UE) must be submitted on the appropriate form within the timeframe specified in the IRB Administration Office Policy (http://irb.wayne.edu/policies-human-research.php).

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ABSTRACT

DISPOSITIONAL MEDIATORS OF BURNOUT SYNDROME IN A SAMPLE OF DIRECT CARE STAFF EMPLOYED AT GROUP HOMES IN A MIDWESTERN STATE

by

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Major: Educational Psychology

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The current research examined the dispositional characteristics that mediated burnout syndrome in a sample of direct care workers who were employed in group homes for the mentally ill in a Midwestern state. Specifically, the indirect effects that the direct care staff's attachment systems and problem solving ability were examined as they applied to their potential burnout status. Attachment theory, a contemporary psychodynamic theory of personality, was used to provide a context for the study. The researcher studied the interactions between construct subcomponents to address a criticism in the literature stating that only total scores were used to study burnout and problem solving.

One hundred and seventeen direct care workers filled out a short demographic survey, the Social Problem Solving Inventory – Revised Short Form (SPSI-R:S), the Maslach Burnout Inventory-Human Services Survey (MBI-HS), and the Experiences in Close Relations – Short Form (ECR-SF). The results of the study indicated that negative problem orientation significantly predicted emotional exhaustion. Rational problem solving was negatively related to depersonalization, negative problem orientation was positively associated with

depersonalization. Rational problem solving was also positively associated with personal accomplishment, a resiliency factor against burnout. Anxious attachment partially mediated the relationship between negative problem orientation and depersonalization. Anxious attachment also partially mediated the relationship between Impulsivity/Carelessness problem solving style and depersonalization, and avoidance problem solving style and depersonalization. Attachment, as a dimension of personality was found to partially account for direct care workers' burnout statuses in a stressful work environment. Recommendations for further research included replicating the study using a larger sample and measuring direct staff's appraisals of stressful situations.

AUTOBIOGRAPHICAL STATEMENT

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